Harveian Lectures
ON
CANCER OF THE UTERUS.

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LECTURE III.

GENTLEMEN,—Most of the cases given were perhaps too little advanced to manifest secondary growths discoverable by clinical investigation, and in only three of them was the disease watched to the end and a post-mortem examination made. In these the glands along the internal iliac vessels, and in one those along the spine, were cancerous. The sacro-uterine ligaments were not affected in any of them, but the cellular tissue around the cervix and in the broad ligaments was diseased in two.

Small cancerous masses are sometimes seen on the interior of the body of the uterus in cases of primary cancer of the cervix. These are sometimes spoken of as secondary deposits. It is, however, difficult to see how secondary deposits can be produced in the body of the uterus from a primary cancer of the cervix. Neither the arrangement of the blood-vessels nor that of the lymphatics can explain it, and it appears more reasonable to regard such formations as new growths from independent centres—such as I have described as occurring in the cervix itself. They are not often met with.

Age seems to have a considerable influence on this form of cancer, though no age above twenty-eight years excludes it. The oldest patient was eighty-one, the youngest twenty-nine. There was only one under thirty; there were six between thirty and forty, and fifteen between forty and fifty; there was one between fifty and sixty, and one over eighty. So that during the ten years in which the menopause generally occurs this disease is far more rife than at any other period of life; it is next most frequent between thirty and forty; and it is comparatively rare before thirty and after fifty. The history of the menstrual function throws no more light on this form of cancer than it does on that of the portio vaginalis. The age at the time of marriage and the duration of married life throws just as little.

With regard to childbearing, it is to be noted that two, or a twelfth of the whole number, had never been pregnant; four had had one child; two had had one child and one miscarriage; two had had two children; one had had two children and abortions; one had had three children; one, three and one abortion; one had had four children; one, five and five abortions; one, seven; one, eight; one, eight and five abortions; one, eleven and one miscarriage; and one, thirteen and two miscarriages. So that fourteen out of the twenty-four had been pregnant fewer than five times.

The characters of the labours, again, appear to have no influence on the production of cancer. Of sixteen cases in which this point was investigated, eleven had had good, one had had lingering, and five had had difficult labours. Only two of these required the use of the forceps: one five times, the cervix being probably cancerous on the last occasion; and one once, the cervix being probably cancerous at the time. So that we have two cases only among the whole number in which labour had been instrumental.

The chief symptoms of cancer are hæmorrhage, pain, discharges, and wasting. Hæmorrhage was present in greater or less amount in all the cases. Its quantity, however, varied greatly, and the time of its appearance with respect to the onset of the disease not less. In some it began at a very early stage, while in others it set in only when the growth had attained a large size. For instance, in one case hæmorrhage had been present for three years when first seen; the disease affected the whole of the cervix, but the surface of the portio was still intact. In this instance the hæmorrhage began probably soon after the growth commenced. In another case, again, where there was a large growth in one lip, hæmorrhage had been present for three weeks only. Pain may be absent throughout; it was absent, or present in a very slight degree, in six of these cases. When present it is often relieved by the onset of bleeding and by lying down. Discharges are commonly present; four of those with advanced disease had none, six had an offensive discharge, five a watery, two a greenish, four a yellow, and one a white discharge. Wasting was present in varying degrees. Eight of the patients had lost much flesh, six very little, and all these presented a somewhat advanced stage of cancer, except the one who was eighty-one years of age. In some cases extreme emaciation was present, while in others, even at the time of death, there was an abundance of subcutaneous fat. Micturition was frequent in only five of all the cases: in the two cases in which the disease began near the internal orifice, in two in which the whole of the cervix was diseased, and in the old woman. As a rule, when the disease attacks the lower part of the cervix the bladder is not disturbed until a very advanced stage of it.

There is a view of the etiology of cancer of the cervix and portio vaginalis which has been recently brought into prominence, chiefly because it has been made the ground for procedures of an operative kind: I mean the view that lacerations of the cervix are a cause of cancer. If this view be correct, it has a very important bearing on treatment of a prophylactic character; on the other hand, if it be untrue, it has a no less important bearing in an opposite direction. It has been said again and again that lacerations of the cervix are the cause of cancer of the lower part of the uterus, and that the cure of the lacerations by Emmett's operation is a means of preventing the development of the disease. Now, what is the evidence with regard to this view? Are there any known facts which favour or oppose it? One fact which favours this view, or which is supposed to favour it, is that cancer is frequent in women who have had many children. Laceration of the cervix occurs so frequently in first labours—and probably far more frequently than in subsequent ones—that we cannot regard multiparity as the cause of lacerations as against uniparity. Indeed, it may fairly be said that when laceration is present, the time when it was produced was during the first labour; and if this be true, and if it be also true that laceration of the cervix is a cause of cancer, uniparity should be as frequent a cause of cancer as multiparity; and if multiparity is really a cause of cancer as against uniparity, then we must explain the fact in some other way than by the laceration present. In the next place, cancer is often present in association with laceration. But association does not necessarily involve the relation of cause and effect—a fact too frequently lost sight of in the study of uterine disease. It is said, moreover, that lacerations occasion the development of cancer by reason of the irritation to which they give rise. Now, if this be true, we should expect to find the starting-points of cancer to lie at the place of greatest irritation—that is, in or close to the tear, or in the surface of the irritated part. But what are the facts? I have described to you cases of cancer of the portio vaginalis and of cancer of the cervix proper in association with lacerations, but in no instance have I seen it attack the lacerated part primarily. Indeed, it appears to avoid it, and to invade it only after the rest of the cervix has become involved in the disease. The tear is the last part to be attacked. But it may be said that although cancer does not commence in lacerations, yet it begins in the everted or irritated surfaces of the lips. I have been able to trace cancer primarily to the surface in no single instance, except in the variety of squamous epithelioma, when it necessarily begins on the surface. But in cases of squamous epithelioma the disease begins on any part of the surface of the vaginal portion, except perhaps the edges of the tear—a fact which does not favour the view I am discussing. When cancer attacks the cervix proper, it begins, in so far as I have been able to discover, in the glands in the substance of the cervix, and a layer of non-cancerous glands is often, though not always, seen between the disease and the surface. This is the condition present whether laceration exists or not, and the fact that the disease begins in the same situation in the lacerated and the non-lacerated cervix militates against the view that lacerations are an important factor in the development of cancer. Moreover, if irritation be such a very frequent cause of cancer of the uterus as is sometimes maintained, the disease should be frequently met with in the procident uterus; but this, again, is not the case. In some hundreds of cases of cancer of the uterus which I have seen there was but one in which the organ was proci-

dent. It appears to me that the facts at present known tend to show that lacerations play no important, if any, part in the causation of cancer.

CANCER OF THE BODY OF THE UTERUS.

The next part of our subject is cancer of the body of the uterus. This is a form of cancer which is much less common than that of the cervix, and indeed it was at one time thought that cancer never attacked this part of the organ primarily. It is certain that the disease occurs much more frequently than is generally supposed. Pichot has collected forty-four cases of what he terms cancer of the body of the uterus. They are all apparently cases of malignant disease, but there is no sufficient evidence that they are all cases of cancer. In saying this I wish it to be understood that no case can be scientifically admitted to be a case of cancer unless sections of the growth have been submitted to examination with the microscope. This brings us down to very recent times—past the time when microscopic examination of tissues meant the examination of scrapings and the search for characteristic cells; down to the time when the arrangement of the various elements of a growth were examined into and their relations observed in their undisturbed position in sections. Ruge and Veit have described more or less fully twenty-one cases in which the nature of the disease was established by microscopic evidence. I have seen twelve cases which were believed to be malignant disease of the body of the uterus, but in only three of them was the growth ascertained to be cancer by microscopical examination, and consequently these three only are of sufficient value to serve my purpose in these lectures. It would only lead to confusion were I to introduce cases as basis for description around the nature of which—that is, whether they were sarcoma or carcinoma—any doubt rests. These cases, together with those recorded by Ruge and Veit, will mainly form the material for the description of cancer of the body which I shall give you.

CASE 20.—The patient was a widow aged fifty-two. She was admitted into University College Hospital complaining of a profuse and offensive vaginal discharge, which excoriated and caused swelling of the external parts. She was a nurse, and eight years previously she received a shock through the sudden death of a patient. This brought on a sanguineous discharge, which has continued more or less ever since. She has been losing flesh for some time, but more especially during the last three months. She was married at twenty-two. Her husband lived eight years. She had one child twelve months after her marriage, and no miscarriages. She said that during the lifetime of her husband she had sore-throat, lost her hair, and took medicine which made her gums sore and teeth to ache. She had a polypus removed from the womb five years ago. She began to menstruate in her twelfth year, was poorly every three weeks, losing a good deal, with bearing-down pain in the abdomen. After the birth of her child the flow returned regularly, but in far greater quantity, and with much more pain than before her marriage. She has suffered from leucorrhœa since she was fifteen. There was no history of cancer in her family.

On admission in January, 1881, she was pale, anæmic, and emaciated; the pulse was 100, and temperature 99° F. The uterus appeared to be of the normal size, but less movable than natural. The cervix was normal, except that a small villous growth could be felt in the os. The outline of the body could not be made out, and the sound was not used. Examination by the rectum revealed several nodules apparently growing from the posterior wall of the uterus. There was little or no tenderness.

The villous growth projecting in the os was removed. On Feb. 5th she had several rigors, and her temperature went up to 105°, and remained above 100° until Feb. 10th. This attack of fever was accompanied by severe pain in, and exquisite tenderness over, the whole of the abdomen. A month afterwards she had a similar attack, but without rigors. With these exceptions her temperature remained between 99° and 100°, and her pulse was over 100 a minute. She complained also of globus and other symptoms usually called hysterical. In March there was œdema of the vulva, and a hard growth about the size of a hazel-nut projected slightly through the os. There was copious greenish-yellow discharge with some blood. She gradually became weaker, and died on March 20th. At the necropsy the small intestines were adherent to the fundus of the uterus and the posterior wall of the bladder. There was a small cyst at the end of the Fallopian tube. At the posterior part of the uterus there were several nodules, two of the size of cherries, others smaller, projecting into the peritoneal cavity. These were of a whitish colour, with injection around them. The upper half of the posterior surface in the middle and the fundus were white and bloodless. The rest, especially the sides, were of a purplish colour, with the veins injected. There was a big nodule on the anterior surface where the intestines were attached, and a communication which admitted the thumb was found between the adherent intestine and the cavity of the uterus. The ovaries were white and atrophied. The uterine wall varied from one-half to one inch in thickness. The cavity of the uterus was a fetid abscess; its surface was irregularly nodular and of a greyish-green colour; beneath this was a layer of highly vascular tissue, and still deeper the altered uterine tissue. The cancer was glandular.

CASE 21.—This patient was fifty-two years of age, and was admitted into the hospital in January, 1884. She had enjoyed good health until fifteen months before, and was a strong woman. "Menstruation," which had ceased about nine years previous to this date, recommenced, and recurred about every three weeks. At this time the flow was of the ordinary colour and not profuse. It lasted at first for two or three weeks, but latterly only for one day. For the last five months bleeding had ceased entirely, but a yellow offensive discharge had been continuously present. Some time after the bleeding commenced labour-like pain was felt at the bottom of the stomach and back, but since January, 1883, the pain had been seated principally in the right side of the pelvis and down the right leg, shooting at times to the left side. For some years before her illness the patient suffered from pain in passing urine, and micturition became frequent in June, 1883, for which she had a growth removed from the "entrance to the bladder." Micturition continued to be frequent after the operation. There had been no difficulty or pain in defecation. She had lost much flesh during the previous fifteen months. Menstruation began at fifteen, was regular and painful, and ceased at forty-three. She had been twice married; first at twenty-three. During her first marriage she had four children; one child and one miscarriage during the second. All her labours were natural. One sister died of cancer of the womb in an asylum.

On admission the patient was thin, but not greatly emaciated. The perineum was excoriated. There was a small superficial ulcer on the inside of the right labium. On the vaginal wall were about a dozen small greenish patches, which felt slightly raised to the finger; there was no loss of tissue. The anterior lip of the uterus was thickened by a growth which projected into the cervical canal, which bled on examination. The uterus was freely movable; the body was a little enlarged, thick, and roundish, so that the whole of the uterus—body and cervix—approached a globular form. There was no thickening anywhere in the pelvis. The sound passed in three inches. The chief thickening was in the anterior wall. The cavity of the body was considerably enlarged; the sound could be moved about freely in it. A good deal of bleeding followed.

The uterus was extirpated. The parts removed consisted of the whole uterus, with the exception of a small irregular rounded portion situated on the left side of the middle line, and reaching almost to the origin of the Fallopian tube. The margin of the opening when this piece was absent was lacerated and nodular. The absent portion was about one centimetre in diameter. The whole organ was increased in size—laterally and antero-posteriorly. The external os and cervix for the lower two-thirds were normal in appearance, but soft and pale. The cavity of the uterus contained some dirty muco-pus. The surface was occupied by a nodular new growth, which on section was seen to extend into the muscular wall as pinkish-white granular-looking growths, the tissue which it invaded appearing gelatinous. The nodules of new growth were irregularly scattered over the inner surface, but were thickest on the right side of the posterior wall. Outside the new growth everywhere except at the point mentioned was a layer of muscle and peritoneum, which varied from one to three millimetres in thickness. A month after the operation the patient died. The wound had almost entirely healed, but there was a small abscess in the remains of the right broad ligament. In the small intestine were several small fistulous openings, which were connected with the scar of the operation. The kidneys and ureters were normal; but the bladder was in a state of chronic inflammation.

CASE 22.—The patient, a single woman, aged sixty-three, was admitted into University College Hospital in January, 1883. She said that she had been losing blood from the vagina occasionally for two years, but not much until March, 1882, when she lost a great quantity, and since then she had been continually losing more than she had from the commencement of her illness until that date. She had fainted several times from the loss of blood. She suffered no pain until the previous March, but since that date she had suffered pain on and off in the bottom of the back and stomach; it was twitching in character, and never lasted more than a minute; it was never severe enough to lay her up, and was not made worse by walking. After the bleedings there was a slight yellow offensive discharge. Micturition had been at times frequent, and sometimes scalding. The patient had suffered for two months from acute eczema of both arms. She had lost much flesh since her illness; her appetite was good. Menstruation began in her thirteenth year; usually regular and profuse, but without pain. It ceased in her fifty-fourth year. She saw nothing afterwards for six years; then she had a slight bleeding twice; after that it ceased for one year, and since that time she had bled frequently. There was no history of cancer in her family.

On admission, she was well nourished and fat. The hymen was intact and the vagina senile. The body of the uterus was large and nodular, and filled the pelvis; it could be felt above the pelvic brim, and it appeared to extend further to the left than to the right. The cervix was far back, very short; the lips were softish. There was no tenderness. The vagina contained a dark-brownish very offensive discharge. Temperature 98·4° to 99·6° F.

The cavity of the uterus was scraped, after which the bleeding and discharge ceased for some time. She ultimately died in the cancer ward of the Middlesex Hospital, under the care of Mr. Henry Morris, through whose courtesy, together with that of Dr. Kingston Fowler, I am enabled to give an account of the appearances found at the necropsy, and a drawing of the uterus:—The body was well nourished. There were several firm adhesions between the omentum and the parietal peritoneum. A large swelling having the appearance of a uterine fibroid was seen at the lower part of the abdominal cavity. The intestines in the middle line of the abdomen were matted together, forming a sac, which on being torn open was found to communicate with the bowel, and appeared to be the seat of a slight fæcal accumulation. The lungs contained several secondary cancerous nodules scattered over the pleural surfaces. Numerous minute secondary deposits were found on the surface and in the substance of the liver. There were three cancerous deposits of the size of peas on the surface of the right kidney. In other respects the kidneys were fairly healthy. The uterus was large and its walls contained three fibroid tumours, two of which were calcified and of the size of walnuts, and one was as large as a man's fist. The walls were much thickened. The inner surface of the body was everywhere cancerous, irregular, and ulcerating. The cervix was healthy. The cancer had not invaded the fibroid growths, but had penetrated through the part of the wall free from fibroids into the broad ligament on the left side, and formed a large mass in that situation, apparently involving the ovary and Fallopian tube. The Fallopian tubes on each side were inflamed and contained pus. The cancer was glandular, and the glands presented a very remarkable appearance. Many of them were coiled up in spaces so that the spaces appeared in section to be filled by circles of columnar epithelium without any connective tissue framework. In many places the epithelial cells appeared normal, while in others they were altered, many-shaped, and more or less broken down. The nodules in the liver presented a glandular structure similar to that of the glands in the uterus.

Cancer of the body may be diffuse or circumscribed. The diffuse form is much the more common; indeed, I have not met with an instance of the circumscribed. Several cases of the latter, however, have been described. They assume a polypoidal shape, and the uterine wall at their base may be healthy, or they may form sessile tumours and grow in the substance of the uterine wall, projecting into the uterine cavity like a submucous fibroid. In the former case the disease may have originated in a polypus already formed, as in Case 19, in which a mucous polypus of the cervix was removed while undergoing the process of becoming a cancer; or it may develop from the first in the form of a polyp. In the second case, when the cancer dips deeply into the uterine wall, it is not improbable that it begins in the deeper portions of the gland, as it so often does in the cervix, and then as it grows it becomes more and more superficial and prominent in the uterine cavity; at the same time it penetrates deeper and deeper into the uterine wall. The further growth of the polypoid form is said to be, not superficial, but in a radial direction towards the peritoneum. The polyp may break down and disappear and leave a mass of cancer in the uterine wall, but connected with the surface. In this way Ruge and Veit explain the origin of circumscribed masses in the uterine wall described as primary, and it is in many cases probably a correct explanation; but there is no impossibility, and indeed no improbability, that cancer may begin in the deeper portions of the uterine glands and there form nodules in the wall just as we found to occur in the cervix, for the uterine glands are known to enter deeply into the muscular wall of the body of the uterus. The diffuse form affects usually the whole of the inner surface of the body. Whether this is the case from the beginning, or whether it is the result of its mode of growth, is not known, and is difficult to determine. In some cases, however, a part of the surface escapes. The cervix is generally respected until a late period. The surface is villous, rough, and ulcerated, or covered with warty nodules, sessile masses, or polypi. The uterus is usually much enlarged; sometimes, however, the enlargement is not great, and even very slight; the wall becomes thickened and hypertrophied by a process, it is said, similar to that which takes place during early pregnancy. As the cancer grows, the successive deeper layers of the wall become involved, and the muscular part becomes thinner and thinner. The cavity of the uterus is in some cases considerably elongated and deformed, in others but little; in some, after the disease breaks down the cavity increases in capacity. In some cases, or in some part of the uterine surface, the disease is quite superficial, the decidua not being much thickened, although diseased throughout, as in Case 22. The disease grows from the glands; it may perhaps begin also in the epithelium of the surface. This has not been actually observed, but the fact that the whole of the surface is generally involved—at least in the specimens which have been examined—is in favour of this mode of origin.

Several cases have been recorded in which fibroid tumours were present with cancer; one of my cases was such. In this case the cancer clearly grew from the uterine glands, and had not invaded the fibroid. Klob, however, has recorded a case in which a fibroid was present and cancerous. He was of opinion that the cancer had commenced in the fibroid. His case is imperfectly recorded, and the growth had begun to break down and to slough, so that the tissues over it had been destroyed, and were in a condition which precluded the possibility of establishing the view of the case adopted by Klob. Moreover, all the histological evidence collected goes to show that cancer of the body begins nowhere except in the epithelium of the surface or of the glands. It has further been shown by the observations of Buhl and Ruge that cancer may extend from the mucosa covering a fibroid and involve the fibroid itself.

The direction or lines of growth of cancer of the body appears to be in two directions—that is, such as to involve the surface and to spread into the deeper structures. The spread of the disease superficially is often stopped at the inner orifice of the uterus and the openings of the Fallopian tubes; and this, although not invariable, appears to be the rule. In some of my cases the cancer had passed the os internum and invaded the cervix; and in a specimen in the museum of St. Bartholomew's Hospital, already referred to, the disease had invaded the Fallopian tubes.

(To be concluded.)

STAFFORDSHIRE GENERAL INFIRMARY.—At the annual meeting of the governors of this institution, on the 28th ult., it was reported that the ordinary income for the past year was £2142, and the expenditure £2953. The books having been neglected, it was impossible to ascertain the number of patients who had been treated. A letter was read from Dr. C. H. Crawford resigning his appointment as physician to the hospital, and a resolution thanking him for his thirteen years' services, and expressing the regret of the board of governors at his retirement, was unanimously agreed to.

ABSTRACTS OF THE

Erasmus Wilson Lectures

ON

EVOLUTION IN PATHOLOGY.

Delivered at the Royal College of Surgeons of England,

BY J. BLAND SUTTON, F.R.C.S.,

ASSISTANT-SURGEON TO THE MIDDLESEX HOSPITAL.

LECTURE II.

SUPPRESSION OF PARTS.—(*Continued.*)

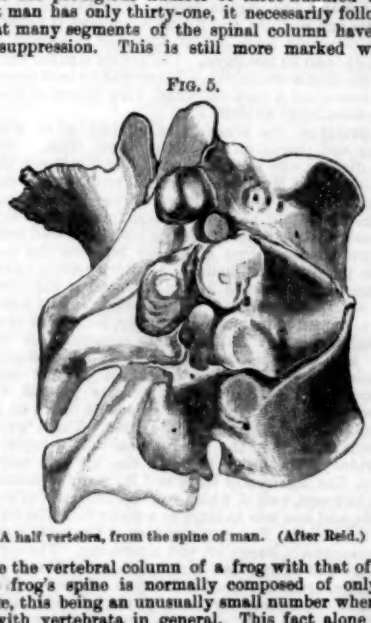
MR. PRESIDENT AND GENTLEMEN,—To the student of mammalian anatomy it has always been a somewhat remarkable fact that, whatever the length and flexibility of the neck, the number of cervical vertebræ remains almost constant; whereas in birds the reverse of this obtains, for the cervical vertebræ are extremely variable in number—a pigeon may possess thirteen or fourteen, but the swan has twenty-five, whilst in the extinct plesiosauria as many as forty cervicals existed in some species. Parker, in his valuable memoir, "The Development of the Green Turtle," has found that at one stage in the embryology of this form fifty-one somatomes are visible externally, but in the adult only forty-one vertebræ are developed, and an examination of the embryos in various stages clearly shows that seven somatomes in the neck and three in the caudal series abort. This suggests an ancestry from forms having a longer neck and tail than existing turtles, and the free suppression of parts indicates a modification by shortening of a form not unlike a plesiosaur. There is abundant evidence to support the view, which at first seems somewhat strange, that there exists an undoubted correlation between the hand and the number of the cervical vertebræ. In such vertebrates as birds the number of the cervical vertebræ and the saddle-shaped articular facets on their centra confer great mobility, and enables the beak to perform actions which rival in delicacy those of the hand and fingers. It is beyond all dispute that as the functions of the hand increase in precision so the number and size of the cervical elements of the spinal column diminish.

In the green turtle we saw that in the embryo several somatomes were suppressed, and now I shall enter upon a discussion to show that it is exceedingly probable that a similar suppression of somites occurs in man. In the first place, the disposition of the cervical nerves suggests that at least one vertebra has disappeared, for in order to harmonise the arrangement of spinal nerves in the cervical region with what pertains in other parts of the column an extra vertebra is requisite. Apart from these anatomical speculations, the observations of teratologists go to show that in the various regions of the column suppression of somites occurs. Professor Humphry[1] has drawn attention to Otto's observation of a spine in which there was deficiency of one-half of the eleventh dorsal vertebra; also a case described by Sandifort in which one-half of the seventh cervical and of the ninth and eleventh dorsal vertebræ is absent, the remaining half being wedge-shaped. Dr. Goodhart[2] has described a fœtal vertebral column preserved in the museum of the Royal College of Surgeons in which only four and a half cervical vertebræ can be made out. The malformation was associated with spina bifida. In the report of the Spina Bifida Committee of the Clinical Society a sacrum is figured in which the left halves of the first and third segments are absent. Willett and Walsham have published a detailed account of a remarkable suppression of vertebræ in a woman aged thirty-one dissected by them, and have referred to the specimens mentioned above. There is in the museum of the Middlesex Hospital a well-prepared skeleton of a presumably full-grown female, in whom there is lateral curvature of the spine caused by absence of one-half of a dorsal vertebra, apparently the third. (Fig. 5.)

Now, all these cases illustrate suppression of halves of the vertebræ belonging to spines presenting less than the normal number. It occasionally happens, however, that the half vertebra is in excess of the proper number. Thus in a case Rokitanski records in his "Pathological Anatomy" (vol. iii., p. 230) there were four half vertebræ, with their half arches and processes, too many. They were so placed on the two sides as to compensate one another, and cause four curves in the spine, two in the dorsal, one in the dorso-lumbar region, and the fourth involved the sacrum. This case, in conjunction with examples of supernumerary vertebræ occurring in the lumbar and sacral series, can only be explained satisfactorily by the hypothesis that during development mesoblastic somites become suppressed, which in the ancestors of man assumed a functional condition. Every human anatomist of moderate experience knows full well that the coccyx may consist of three, four, or five segments. That among mammals the caudal vertebræ may vary from three in the tailless monkey Inuus to as many as forty-six in Manis longicauda. If it is true that mesoblastic somites are suppressed in other parts of the column, but occasionally attain complete development, we ought to have them reappearing in the caudal series.

When we remember that some sharks and serpents may possess the prodigious number of three hundred vertebræ whilst man has only thirty-one, it necessarily follows that a great many segments of the spinal column have undergone suppression. This is still more marked when we compare the vertebral column of a frog with that of a fish, for the frog's spine is normally composed of only nine vertebræ, this being an unusually small number when compared with vertebrata in general. This fact alone would suggest that supernumerary vertebræ ought to occur in frogs. Bourne[3] has recorded a case in which a spine of Rana temporaria was composed of ten vertebræ, and Howes[4] has also described a similar specimen, which agreed in its main details with Bourne's case; in each the supernumerary vertebra was in the sacral region.

FIG. 5.



A half vertebra, from the spine of man. (After Reid.)

The notion of tailed men is usually treated with ridicule because on careful examination the supposed cases have turned out to be lipomata, spina bifida, or coccygeal tumours. But human fœtuses with tails are certainly met with. A careful examination and description of such a case is given by Gerlach;[5] in this case the tail not only contained striated muscle fibre, but notochord.

To return to the question of half vertebra. Professor Albrecht[6] has reported an anomaly of this character which occurred in a python (Python sebæ). The skeleton consisted of 333 vertebræ, but interpolated between the 195th and

[1] The Human Skeleton, p. 123.

[2] Journal of Anatomy and Physiology, vol. ix., p. 9.

[3] Quarterly Journal of Microscopical Science, vol. xxiv., 1884: On certain Abnormalities of the Common Frog.

[4] Anatomischer Anzeiger, No. 11, 1886: On some Abnormalities of the Frog's Vertebral Column.

[5] Ein Fall von Schwanzbildung bei einem menschlichen Embryo. Morp. Jahr., Bd. vi., s. 108. 1880.

[6] Bulletin du Musée Royal d'Histoire Naturelle de Belgique, tom. xi., 1883.

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196th segment on the left side was an additional half vertebra. That in the normal course of events the vertebral centra are developed from a single nucleus is beyond all doubt; the parts have been carefully investigated by many observers: I have spent many hours in vainly hunting for two nuclei. It is equally certain that under exceptional circumstances two centres may be deposited and remain independent, as is the ordinary method in the ossification of the odontoid process of the axis. We must also remember that Müller detected two nuclei in the sacral vertebræ of birds.[7] Cope[8] has recorded the following interesting observation, that in an extinct batrachian found in the Permian formation of Texas the vertebral bodies are composed of two lateral pieces. The skeleton belonged to the order Ganocephala, and was named Eryops megalocephala. Between each vertebra a large intercentrum was developed, and the centrum of each vertebra consisted of two lateral pieces or pleurocentra. A similar condition of things existed in other strange forms belonging to this order. Thus there is good reason to believe that in the bilateral nuclei for the odontoid bone we have an instance of the retention of a primitive character, whilst in the occasional existence of a half vertebra, either in excess or diminution, or accompanied by disturbance in the normal ossification of the column, we have to deal with atavistic phenomena.

The conclusions which may be legitimately drawn from the foregoing facts may be summed up in a few brief statements:—1. During development the human embryo possesses more mesoblastic somites than are utilised in the formation of the permanent vertebral column. 2. At least one undergoes suppression in the cervical and lumbar region respectively, and probably many in the caudal segment of the column. 3. Occasionally one, or half of one somite, usually suppressed, may persist, and give rise to a supernumerary vertebra or half vertebra; or the suppression may extend beyond its usual limits, and the total number of segments in the column be fewer than usual. The diminution may affect only one half of a vertebra. 4. Under exceptional circumstances a vertebral centrum may arise from two distinct centres of ossification; this must be regarded as indicating the reappearance of an ancestral character. The study of the evolution of the spinal column teems with illustrations of the two laws—namely, those of *suppression* and *coalescence*.

Parasitic Fœtuses.—These may vary from a shapeless mass of varying proportions to a more or less fully formed individual attached to a perfect child. They are most common in the sacral region, and they may occur on any vertebrate from fish to man. A careful consideration of preserved specimens, as well as actual observations on the eggs of fish and amphibia tend to show that from a single ovum two embryos may be produced. This conclusion is supported by the following facts: 1. There is a continuous series of forms from one extreme of duplicity to the other. 2. Each embryo in a double monstrosity is smaller as a rule, but never larger than a normal single fœtus. If the duplicity were the result of the fusion of two ova, this condition would not be so constant. 3. Double monsters are invariably of the same sex. These facts render it probable that when twins occur of the same sex they are the products of a single ovum. Parasitic fœtuses and supernumerary limbs in the sacral region may be regarded as suppressed embryos, the autosite and parasite originating from one ovum.

We must now consider some points in the history of the mammalian ovary of considerable importance. The fecundity of fish is proverbial; it has been estimated that the roe of a cod-fish contains 9,344,000 ova. From various obvious intrinsic and extrinsic causes only a fraction of this number attain an adult condition, and in the same way only a small fraction of those actually hatched come to maturity. Of the very large number of eggs deposited by frogs only a small proportion of the tadpoles resulting therefrom attain an adult condition. The same is equally true of birds. Thus a bird which produces ten pairs of young during its lifetime (and this is far below the fertility of many birds) will, if we take its life at five years, increase to a hundred millions in about forty years. (Wallace.) Yet only a small proportion of the ova become mature. What is true of fish, batrachians, and birds is equally true of mammals, including man. Waldeyer has computed that the ovaries of a fœtus contain at birth no fewer than 300,000 ova. This is an exceedingly high estimate, and a very large margin must be allowed for portions of the same ovum appearing in two or more sections. Be this as it may, it is certain that if a section of the ovary of a fœtus be compared with one taken from a girl at puberty, diminution in the number of the ova is a most striking feature. This can only be accounted for in two ways: either many of them are suppressed without advancing beyond the fœtal stage, or they ripen and undergo retrogressive changes. As a matter of fact, the ripening of ova, the formation of Graaffian follicles and corpora lutea, commences very early, even at the seventh month of fœtal life. It appears that this fact was known to Valisneri in 1733; but attention was turned to this question in consequence of the writings of Carus (1837) and Ritchie (1842).[9] Several investigators have turned their attention to the subject, among whom may be mentioned Waldeyer, Beigel, De Sinéty, and Balfour. The researches of Beigel are especially interesting; for he shows most conclusively that the ova not only ripen in fœtal ovaries, but the follicles undergo retrogressive changes and form corpora lutea. I have examined systematically a very large number of fœtal ovaries, and am able to confirm the statement that the follicles enlarge, the ova ripen, and then undergo suppression. It must be borne in mind that few of these early ova are really shed into the peritoneal cavity, as occurs at and after puberty. The various changes are represented in Fig. 6. This ripening and suppression of ova is not confined to fœtal life or the period immediately succeeding birth; it goes on continuously, but at a diminished rate, from its commencement to puberty, as I have assured myself by examining ovaries of children at all ages between these two extremes. Ova shed in the interval between birth and puberty are not to be regarded as abortive, for there are instances, fortunately rare, in which girls have been impregnated at the age of ten.

FIG. 6.

Section of an ovary of a human fœtus at the ninth month. R F, Ovum in its follicle. C L, Corpus luteum. Cyst.

Having satisfied my mind beyond all doubt that this remarkable suppression of ova occurs in the human fœtus as a normal process and not an occasional event, I secured the ovary from the fœtuses of mammals as widely different as a monkey and a kangaroo, a lemur and a sloth, a Japanese deer and a cat. The species selected were the bonnet monkey (Macacus sinicus), the great kangaroo (Macropus major), the ring-tailed lemur (Lemur catta), and a deer (Cervus sika), besides other immature forms. In all these cases the ovaries exhibited follicles in every stage of development, growth, and suppression. If this process goes on in the ovaries of mammals as widely different as the species named in the above list, there can be little doubt that it is general throughout the mammalian series, and there are good reasons to believe that the process occurs in animals outside the mammalian circle. The only explanation to be offered concerning this phenomenon seems to be this: Mammals are to be regarded as derivatives from amphibian forms, which in their turn had a piscine ancestry. In order to maintain themselves in due proportion they must bring forth a large number of offspring, so as to guard against the wholesale destruction of their young by their natural enemies. The higher mammals are in a very large measure exempt from this danger, and the necessity for such extraordinary fecundity as the Ichthyopsida manifest is averted. Nevertheless, by virtue of the law of inheritance the ovary possesses an enormous number of ova. Although mammals are thus spared the trouble of bringing such large numbers of young into the world, the suppression of ova acts as an intrinsic source of danger,

[7] Johannes Müller.

[8] Proc. American Philosoph. Soc., vol. xix., p. 51, 1880-82.

[9] Tait: Diseases of the Ovary.

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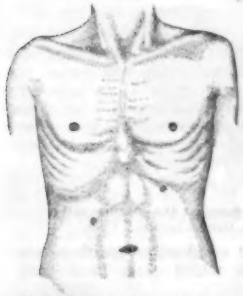
for these unused follicles become in some instances the source of ovarian cysts, not in the human female only, but in the individual species throughout the subkingdom mammalia. It serves as an excellent instance of the application of evolution to pathology. Further evidence regarding the fecundity of the progenitors of the human species is furnished by organs other than the ovaries.

If I were asked by a student to furnish him with a single character, selected from the arterial system of mammals, which could be relied upon as a distinguishing feature in their anatomy, I should certainly choose the internal mammary and deep epigastric arteries. These remarkable vessels form a double line of communication situated on each side of the median line of the abdomen, and serve to connect the subclavian and iliac systems. The parallel offered by two main arterial stems coursing along the ventral aspect of the trunk seems to correspond so closely with the two main stems of the primitive aortæ that a morphological explanation of this character seemed irresistible. Prolonged medication and continued observation directed to this question have at length served to convince me that these arteries have some relation with the original disposition of the mammary glands. In man and many quadrumana among the higher Eutheria, and in Sirenia (manatee and dugong) among the lower, the mammæ are situated on the thorax. In the cow, mare, ass, and the like the mammæ occupy an inguinal position. The insectivorous Eutheria, as in so many other characters, hold an intermediate place in this respect, for the teats extend from the pectoral to the abdominal region. In the bats the mammæ may occupy, as in Pteropus, the axillæ; this is also the case in Galeopithecus; whilst in some lemurs these glands are placed on the arms. These last-mentioned situations are altogether exceptional; the most common regions are the pectoral, abdominal, and inguinal. These facts are suggestive of a primitive disposition of the mammary glands along the whole length of the ventral aspect of the trunk. If it be probable that this remarkable disposition of arteries is in any way related to the primitive arrangement of these glands, it would necessarily follow that in cases where the suppressed mammæ reappeared as supernumerary organs they ought most frequently to occur in relation with these vessels. This is exactly what happens. Supernumerary nipples and mammæ are by no means rare, for one observer, Dr. J. Mitchell Bruce, in a careful and valuable paper,[10] has considered sixty-five cases which came under his observation in three years. This observer informs us that out of 207 men examined in succession 9·11 per cent. presented a supernumerary nipple, and of 104 women 4·807 per cent. In the majority of cases the additional nipple was single, and without exception situated on the front of the trunk below and within the ordinary nipple, and more frequently on the left than on the right side. In more than one instance the anterior abdominal wall was the seat of the abnormality (Fig. 7). Until the appearance of Professor Leichtenstern's oft-quoted paper[11] supernumerary mammæ were believed to be extremely rare, and it is to this writer that the credit is due of exposing the fallacy. I am unaware of any observer who has personally examined sixty-five and eleven additional cases, except Dr. Mitchell Bruce; Leichtenstern's total was made up of thirteen cases noticed by himself and ninety-two recorded by others. These records clearly show that supernumerary nipples in nearly all cases follow closely the line of the internal mammary and deep epigastric arteries. The occurrence of nipples in male mammals is capable of easy explanation. Darwin was of this opinion: "If we suppose that during a former prolonged period male animals aided the females in nursing their offspring, and that afterwards from some cause (as from the production of a smaller number of young) the males ceased to give this aid, disuse of the organs during maturity would lead to their becoming inactive."[12] This view is very plausible and possible, but it is equally probable that, as every mammal at one period of embryonic life is hermaphroditic, the mammæ persist as remnants of that condition; in the same way the functional parovarian in the female represents the efferent ducts of the male gland. The fact that supernumerary mammæ occur twice as frequently in the male as in the female is to be accounted for on the principle of correlation. The female mammæ are functional, and require more blood-supply; this leads to dwarfing of the adjoining glands. The contrary of this pertains in the male. Our knowledge of accessory nipples and glands has been considerably increased since Darwin considered the matter, for, having regard to the very rare and in some instances questionable cases of supernumerary mammæ on the thigh and back, he thought that they weakened the probability of reversion. This did not prevent him ending the discussion in this way: "On the whole, we may well doubt if additional mammæ would ever have been developed in both sexes of mankind had not his early progenitors been provided with more than a single pair." No one can examine the evidence since accumulated without agreeing with this view; hence accessory mammæ must be regarded as atavistic structures in a true sense, and their occurrence is not confined to men, for they are not infrequently seen in other mammals, especially cows. The very valuable inquiry conducted by Dr. Champneys,[13] "On the Development of Mammary Functions by the Skin of Lying-in Women," adds a new interest to the matter, for it seems to prove that supernumerary mammæ without nipples may lie hidden under the skin of the axilla, and become active when stimulated by the increased function of the normal mammæ at the termination of pregnancy. Thus, the only conclusion one can arrive at from these facts is that the suppression of ova in fœtal ovaries and the very frequent occurrence of supernumerary mammæ and nipples are indicative of an ancestry from forms which not only produced a greater number of offspring, but in whom the males assisted in giving suck to the young.

It is impossible to reflect upon the preceding facts without feeling convinced of the truth of Bacon's remark: "No natural phenomenon can be studied in itself alone, but to be understood must be considered as it stands connected with all nature."

FIG. 7.



A supernumerary nipple situated on the abdominal wall of a boy.

[10] Journal of Anatomy and Physiology, vol. xiii., p. 495.
[11] Virchow's Archiv, Bd. lxxiii.

DISEASE IN THE PUNJAB.

BY SIR JOSEPH FAYRER, M.D., F.R.S., K.C.S.I.

IN the annual report on the sanitary administration of that part of Northern India included in the Government of the Punjab for 1885, there are facts recorded which it may be interesting to notice.

The population, according to the last census, is 17,514,978. The deaths from all causes among these were as follows:—

		Per 1000.
Cholera	1,936	0·10
Small-pox	7,575	0·40
Fevers	346,763	18·40
Bowel complaints...	17,711	0·94
Injuries	127,606	6·77
All causes	507,140	26·90

This return shows how relatively small a part cholera plays during some years in the mortality of the population, but how very grave and important a death cause is found in climatic fevers—a subject which stands much in need of further investigation.

There are two items among the death causes which are of special interest, and therefore worthy of attention. Under the head of injuries, which gives 127,606 deaths, there are recorded 852 from snake-bite, 146 from hydrophobia, and 17 from wild beasts—the latter item being small indeed compared with the same returns from other parts of India. The deaths from snake-bite are doubtlesss due to Naja tripudians, or the cobra; Bungarus cœruleus, or krait; and Echis carinata, or small (carpet) viper; and must, one supposes, be considered as inevitable, albeit it is difficult not to consider them as among those deaths which should be regarded as preventable. The hydrophobia cases, which

[12] Descent of Man. [13] Med.-Chir. Trans., vol. lxix., p. 419

seem to be on the increase, certainly suggest a similar idea; and also that here would be an excellent opportunity of testing Pasteur's method of treatment—a suggestion which may perchance be deemed not unworthy of adoption by some of our medical officers in the Punjab.

The following details are taken from the report cited; one of the last, it is to be feared, which will be drawn up by Brigade-Surgeon Bellew, C.S.I., whose retirement deprives India of one of her most distinguished sanitary officers:—

"The total deaths registered under the head of 'snake-bite' were 852, against 900 in the previous year. In the following districts the number of deaths due to snake-bite was larger than in the rest of the districts in the province: Lahore, 67; Mooltan, 61; Gujranwala, 58; Jhelum, 51; Muzaffargarh, 49; Kangra, 48; Thaug, 45; Montgomery, 42; Karnal, 41. It appears from the returns for the previous years that in these districts deaths from snake-bite are always more numerous than in the other parts of the province.

"The deaths from 'hydrophobia' have of late years very considerably increased, as will be seen from the subjoined table:—

1885	146	1881	139
1884	158	1880	107
1883	117	1879	69
1882	128		

Of the 146 deaths registered during the year under review, 20 occurred in Hoshiarpur, 19 in Lahore, 18 in Amritsar, 8 in Mooltan, 7 in each of the districts of Hissar, Ludhiana, Gurdaspur, Montgomery, and Sialkot.

"Five deaths were caused by scorpion sting—viz, 4 in Peshawar and 1 in Mooltan.

"The number of persons killed by wild beasts was as follows:—Carried away by wolves, 3; by jackals, 7; torn by a leopard, 1; by boar, 1; by bears, 3; killed by crocodiles, 2. There are comparatively few tigers in this part of India.

"The deaths registered under the head of 'other causes' were 127,604. Of this number 27,390 were due to chest diseases."

The above shows what an ample field exists for the study of disease in India, and what large opportunities our young medical officers may enjoy of prosecuting their studies in pathology, epidemiology, and hygiene in all its branches. The subject of fevers especially needs elucidation, and should be studied in a spirit of independence as regards preconceived notions of fever etiology.

Wimpole-street, W.

SOME CONSIDERATIONS IN REGARD TO THE CAUSATION OF SEX.

BY A. J. WALL, M.D. LOND.,
H.M. INDIAN ARMY.

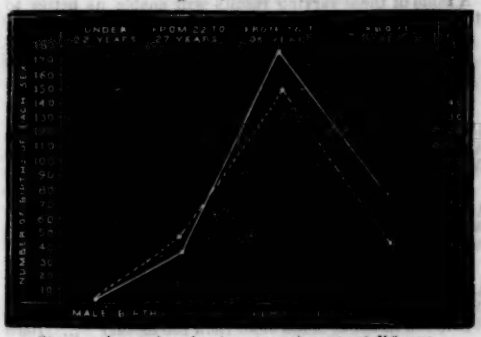
(*Concluded from page 263.*)

IN the cases of the fathers and mothers that have been taken it will be observed that each has been treated without reference to the other. The influence of the age of the mother has been considered without regarding the age of the father, and *vice versâ*. But though this is so, yet, as these were families whose parents married under the ordinary conditions and rules of society, it is clear that a very large proportion of the fathers were a few years older than the mother, and therefore these families must have a preponderating influence. In fact, in these statistics the age of the father was on the average 6·6 years greater than that of the mother in the whole 1200 families. But if we take the proportions obtained from all these families and contrast them with those we shall obtain by selecting families in which wide differences existed between the ages of the fathers and mothers, we shall then be in a position to see what results are due to these great differences of age.

There are in these tables 111 families in which the father was considerably younger than the mother, the differences being from nine months to ten years. In these families there were 546 children, 297 males and 249 females, or 119·2 males to 100 females, being a great excess of males over the mean proportion of 107·4 to 100. If we divide these births into periods according to the age of the mothers we obtain the following results:—In the period of immaturity only two children were born, one of each sex, showing that when the father is younger than the mother, the mother as a rule marries somewhat late in life. In the period from twenty-two to twenty-eight years there were 86 births, 39 males and 47 females, or only 82·9 males to 100 females, against 98·3 males to 100 females, which was the proportion for the whole of the families, showing again how incapable the immature male is of imprinting his sex on the offspring when the female is at her prime. From the twenty-eighth to the thirty-sixth year inclusive of the mother, 179 males

CHART 3.

Ages of Mothers.



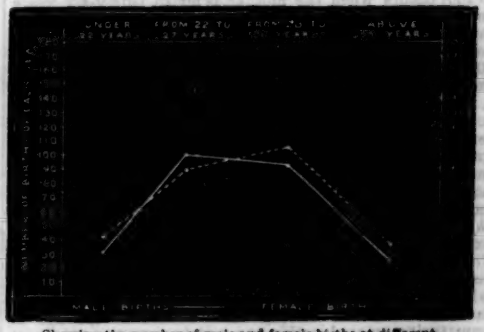
Showing the number of male and female births at different periods of the ages of the mothers in families in which the father was younger than the mother.

were born to 156 females, or 114·7 males to 100 females, or an excess of male births over the 111·6 males to 100 females occurring in all families taken together; whereas in the last period of decline of the power of the mother there were 78 males to only 45 females, or 173·3 males to 100 females, an enormous excess of males over the proportion obtained for this period at all ages of 114·2 males to 100 females. Chart 3 shows those varying proportions.

Now let us contrast this with a series of families as widely different as possible—that is, where the father is much older than the mother. In 111 fertile families in these tables the

CHART 4.

Ages of Mothers.



Showing the number of male and female births at different periods of the ages of the mothers in families in which the father was more than fifteen years older than the mother.

father was older than the mother by more than fifteen years, the excess varying from fifteen years to forty-nine years. In these families there were 519 children, 255 being males and 264 being females, or only 96·5 males to 100 females, being actually an excess of females at all the ages of the mother taken together. During the period of immaturity of the mother there were 34 males born to 39 females, or 87 males to 100 females, or an excess of females. In the period from twenty-two to twenty-seven years 100 males were born to 91 females, or 109·8 males to 100 females, or an

excess of males. From twenty-eight to thirty-six years inclusive, 97 males were born to 103 females, or only 94 males to 100 females; whereas in the last, or declining period of life 24 males were born to 31 females, or only 77·4 males to 100 females, contrasting markedly with the proportion of 114·2 males to 100 females obtained for this period from families at all ages of the fathers, and still more strongly with the proportion of 173·3 males to 100 females obtained for the same period in families where the father was younger than the mother. Chart 4 shows the results obtained from these families, and, as it is drawn on the same scale as Chart 3, it illustrates also the relative fertility of these families, differing only in the age of the father, and shows how comparatively infertile families are when the father is aged.

A table of these varying results will enable us better to study the relation between these differences.

NUMBER OF MALES BORN TO 100 FEMALES UNDER VARYING CIRCUMSTANCES AS TO THE AGE OF THE PARENTS.

A. *At all ages of the mothers.*	
All births	107·4
Where the father is younger than the mother	119·2
Where the father is much older than the mother ...	96·5
B. *Mothers below twenty-two years of age.*	
All births in this period	114·9
Where the father is younger than the mother	100·0
Where the father is much older than the mother ...	87·0
C. *Mothers from twenty-two to twenty-seven years.*	
All births at this period	98·3
Where the father is younger than the mother	82·9
Where the father is much older than the mother ...	109·8
D. *Mothers from twenty-eight to thirty-six years.*	
All births at this period	111·6
Where the father is younger than the mother	114·7
Where the father is much older than the mother ...	94·0
E. *Mothers above thirty-six years.*	
All births at this period	114·2
Where the father is younger than the mother	173·3
Where the father is much older than the mother ...	77·4
F. *At varying ages of the fathers.*	
Where the fathers are below twenty-two years of age	71·0
Fathers between twenty-two and thirty-six years ...	109·5
Fathers from thirty-seven to forty-eight years ...	107·1
Fathers above forty-eight years	92·4

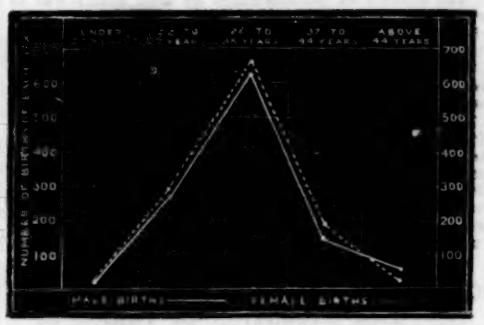
These figures speak for the most part sufficiently clearly for themselves. Thus the highest rate of male births (173·3 to 100) occurs when the mother is above thirty-six years and the father is younger than the mother. The lowest rate of male births (71 to 100) is seen when the father is below twenty-two years of age, and the next lowest (77·4 to 100) when the mother is above thirty-six years of age and the father is more than fifteen years older than the mother. A great excess of females (82·9 males to 100 females) also occurs when the mother is between twenty-two and twenty-seven years and the father is younger. It has long been known that in illegitimate births the females are more numerous than in legitimate births, and Darwin, whose notice nothing seemed to escape, in his "Descent of Man," suggests that the excess may be due to the want of care that these mothers experience during parturition, leading to excessive deaths amongst the males from their greater size. This table renders it probable that the excess may be partly accounted for by the mother being frequently at the age in which excess of females is to be expected, and partly to the fact that the male is very often indeed at the age of immaturity, an explanation to a certain extent to the credit of humanity.

But there is one portion of this table that requires notice. In all the births between twenty-two and twenty-seven years of age of the mother, the male birth-rate is 98·3 to 100 females. But when the father is younger than the mother, the male birth-rate sinks to 82·9 males to 100 females; whereas when at the same age of the mother the father is more than fifteen years older than the mother, the male birth-rate, instead of sinking further, rises to 109·8 males, contrary to all expectation. We must therefore submit the 2275 births taking place at this period of the mother's age to a more minute analysis, to which they are well entitled, as they represent nearly one-third of the entire number of births.

In the first place, the greatest proportion of female births obtains in the twenty-second and twenty-third years of the mother's age, when the proportion is 87·9 males to 100 females. In regard to the age of the father, the greatest proportion of male births for this period of the mother's age is when the father is between twenty-two and twenty-seven years. When at this period of twenty-two and twenty-seven years of the mother's age the father is younger than the mother, but only by a few months, there are only 78·3 males born to 100 females; but when the father and mother are as nearly as possible equal in age, the difference not exceeding six months either way, the proportion of males rises to 145·7 to 100 females. But when the father is older than the mother, but neither of them exceeding twenty-seven years, the male birth-rate drops to 96·2 to 100 females. Thus, we see that when the father and mother are both at their prime, the influence of the male parent in imprinting sex on the offspring is stronger than that of the mother; but let the father be even a little beyond the prime, or a little below it, and the mother is far more powerful. When the father is between twenty-eight and thirty-six years, the mother's age still being between twenty-two and twenty-seven, the birth-rate is 98·7 males to 100 females; and when the father's age rises to between thirty-seven and forty-eight years, the male birth-rate drops to 95·4 to 100 females. But after this a great change occurs, for when the father is older than forty-eight, the male birth-rate, instead of dropping further, rises to 133·3 to 100 females. Is this totally unexpected rise due merely to smallness of

CHART 5.

Ages of Fathers.



Showing the number of male and female births taking place when the mothers are between twenty-two and twenty-seven years at different ages of the fathers.

numbers, or to a real preponderance of male births under these circumstances? If we increase the number by taking all births after the father has reached forty-five years, the age of the mother remaining between twenty-two and twenty-seven, we get an increased proportion of males—viz., 138·7 males to 100 females. So also when the mother is below twenty-two and the father is above forty-five the proportion is 175 males to 100 females. It seems, therefore, in the highest degree probable that when the mother is under twenty-eight and the father is very much older a considerable excess of male births occurs. This agrees with what I have observed in private families, and historical evidence points the same way: the cases of Louis XIII., our Edward VI., the offspring of both the Napoleons, and many others will occur to every reader. *The explanation may be too obvious to require mention here;* but I do not think this. It certainly cannot be due to the father having increased sexual power in his declining years, for when the father is above forty-eight, but the mother is between twenty-eight and thirty-six years, only 88·8 males are born to 100 females. It will be far more reasonable to attribute it to the very modified sexual feeling elicited in the female when the male is "out of all reasonable match," as Touchstone says, which may produce an actual inhibitory effect on the nerves of the generative system. If this be so, it would throw an additional light on the reason why in illegitimate births there should be an increased number of females, as these conditions are there reversed. Chart 5 shows the number of

male and female births taking place when the mothers are between twenty-two and twenty-seven years at the different ages of the fathers.

The results obtained may be briefly summed up by saying that each parent while in his or her prime has the greatest power of imprinting his or her sex on the offspring. That probably the male is the most potent when the age is exactly equal. That the immature parent has very little power of doing so, the immature male being peculiarly powerless, for of all births when the fathers were below twenty-two, the proportion of male births was only 71 to 100 females. That when there is a difference in the age of the parents the sex of the offspring is most frequently that of the parent who is nearest the prime of life; but that if the male should be much older than the female, the female being in her prime, a considerable excess of male births may be expected. Thus, males are obtained with the greatest amount of certainty with females above thirty-six years of age and males distinctly younger, and the same result is obtained with old males and disproportionately young females, and also with immature females. Whereas females are greatly in excess if we take males under twenty-two years of age and females above that age, or else males above fifty-six years of age with females about fifteen years or twenty years younger.

It may be stated in addition, as a by-product of these inquiries, that in England the peers, of whom a fair proportion marry in their prime have a considerable excess of male children. The average age at marriage of fifty peers, or eldest sons of peers, that had offspring was thirty years; not one was below twenty-one years, and thirty-two were above twenty-five years. The lowest classes in England, who exercise about as much forethought in their domestic arrangements as dogs, have also apparently an excess of males. Of fifty fertile marriages of this class taken indiscriminately, the dates being verified as far as possible, twenty-three husbands were below twenty-one years of age, and only six were above twenty-five, the average age on marriage being twenty-two; the whole of the families, it is scarcely necessary to add, were in receipt of charitable relief. In the middle classes there appears to be an increased proportion of female births through the later marriage of the males. In England, with the exception of 1884, the proportion of male births, as might be expected, has been falling for many years. The cause of the rise in that year, which may not be continued, is far too obscure a subject to be speculated on here.

In regard to the exact cause of sex, the evidence here adduced is very unfavourable to the view that it depends merely upon the number of spermatozoa that penetrate the ovum. For we see that men at advanced age are even more capable than very young men of producing males. And, again, females in their prime give an excess of females with males somewhat older, but males are more common when the father is greatly older. Not to discuss the question minutely, it would seem that the vigour of the embryo-forming tissue is a more important agent than its quantity, and that this may be modified in various ways, the female element being especially liable to modification. There are not wanting, for instance, cases in the tables that seem to imply that anything that debilitates a parent renders it far less capable of imprinting its sex on the offspring. These, however, are points quite beside the present question, which is the influence of the age of the parents. But enough has been said in this relation to prove how important a factor this is, for it can change a mean proportional birth-rate of 107·4 males to 100 females, on the one hand, to 71 males to 100 females, and, on the other, to no less than 173·3.

FRENCH HOSPITAL AND DISPENSARY.—The nineteenth annual dinner in aid of the funds of this charity took place on the 5th inst., Comte d'Aubigny in the chair. Opened in 1867 and enlarged in 1878, it has afforded relief to 4388 in-patients and to 100,175 out-patients, drawn from 24 nationalities, so that, although French in name, the charity is cosmopolitan in character. During the evening subscriptions amounting to about £2000 were announced.

THE governors of the Bedford Infirmary having determined to purchase the fields contiguous to the building from the Duke of Bedford's trustees for £3350, an intimation has been received from his Grace of his intention to contribute £1000 towards the purchase-money, and a like donation has been promised by Mr. Whitbread, M.P.

MINIMA VISIBILIA AND SENSORY CIRCLES.

BY THE LATE BRIGADE SURGEON T. OUGHTON,
ARMY MEDICAL DEPARTMENT.

HARRIS found that a black square on a white card, the side measuring $\frac{1}{75}$ in., is distinguishable as a mere speck at the distance of 40 ft. from an emmetropic eye, whilst the square is not perfectly defined in colour at a further distance than 7 ft.; he found also that these distances corresponded to visual angles of 44″ and 4′5″ respectively. Ernst Weber 's experiments on the skin elaborate a result that a circular metallic tube, the diameter measuring $\frac{1}{4}$ in., is felt as a single point when pressed against the palm of the hand, whilst its shape may be perceived with its diameter exceeding $\frac{1}{2}$ in. (sensory circle of the palm). Hence two varieties of minimal perception may be recognised—viz., points and areas (minimum visibile vel tactile et punctorum et extensionum vel formarum). Our present subject will deal with the proposition that all minima are of a secondary nature, defining and being defined by a limitation in the acuity of muscle-perception. That there is such a limitation in the apperception of visual angles is exemplified in the judgment of apparent distance being liable to error in the retina of actual objective distance, as well as in apparent relievo being less marked in a like ratio (minimum motorium). One strong argument consists in bracketing together the non-existence of minima auditoria vel objectoria with the absence of suitable motorial appendages to these senses; so by analogy physiology would probably supply no basis for dogmas on the present subject were there wanting the groundwork of a visual or tactile muscular diagnosis. Then, again, the phenomena of minima visibilia and sensory circles are so harmonious in two very diverse sensations that nothing short of a common causation can adequately solve the harmony; neither are discrepancies in these phenomena, where any exist, explicable on terms other than those of the proposition under consideration. Finally, by coupling the facts that visual angles are of muscular origin, whilst the minima of vision have been resolved into such angles by Harris ("Treatise on Vision"), the proposition as regards vision seems to be adequately verified.

Let us examine a series of ascertained data so as to institute a comparison between their solution by the hitherto prevalent and the present doctrine, simply premising that the former tenet has been constructed on the view that all sentient points exercise their directional and positional powers by an inherent faculty of primary sense—thus: "The skin is the criterion of locality" (Todd and Bowman). ..... "The simple sense-impressions of the optic nerve are colour, intensity, and direction" (Le Conte). As regards the skin, there is no cutaneous point that we can prick without producing pain; as regards the retina, a star is distinctly visible and without apparent magnitude, even though it be magnified 5000 diameters. From these data we are committed, by the former dogma, to a conclusion that each minimum punctorum corresponds with the brain by a distinct and duly insulated nerve-fibril. Dr. Young has calculated that 10,000,000 of nerve-fibrillæ pass through the contracted orifice of the sclerotic tissue, and as many are possibly transmitted by each sensory nerve. Now, such a minute subdivision into nervelets is entirely superfluous, according to our proposition. To all intents and purposes, both skin and retina may be regarded as sentient expansions or superficies, whose every minimal point is subject to a muscular surveillance. This conclusion seems to be warranted by any limit to the minuteness of visibility, with sufficient luminous intensity, having been disputed by some metaphysicians; and, additionally, by stars of the smallest magnitude being seen under the comparatively greater visual angle of 44″, whilst the smallest tactile impression is referred to the entire area of its correspondent sensory circle, equalling in apparent size the impact of numerous sentient impressions on the same area. It has been surmised, with a view of covering these peculiarities, that each visual minimum of 44″ corresponds to a single cone of the bacillar layer, so that an identical excitation is effected by the incidence of purer or more luminous raylets; but a serious objection consists in the surmise being inapplicable to the case of sensory circles—namely, that their numerous ultimate fibrils coalesce into a single sensory fibre. For, granting

this to be so, two cutaneous points in adjacent sensory circles of $\frac{1}{4}$ in. diameter would be apparently duplicate with an interval between them of only $\frac{1}{4}$ in., which is not the case. Sensory circles, therefore, are mere metaphysical abstractions in the above respect, and the inextricable blending or interlacement of their impressions points only to a common muscular influence.

Then, each retinal cone must be subdivided into at least three terminal fibrils in order to explain intelligibly the perception of colours (Young, Helmholtz, &c.); there must be a blue, yellow, and red, or a red, green, and violet fibril (primary colours), whilst the function of the entire cone naturally combines these minimal colours for a sensation of minimal whiteness. I must protest against the coinage of a minute anatomy in this perfunctory manner; both matter and organisation are pliable commodities, but I think hypothesis must be stretched here. Quite sufficient difference exists in the intrinsic nature of coloured lights to explain adequately a variety of correspondent coloured perceptions without resorting to variations in nervous mechanism; neither should it be forgotten that the province of nerve organisation is to interpret rather than to modify nature, for of a truth (others notwithstanding) there is a latency in the cerebral constitution of every natural imponderable that may be transmitted thereto by natural channels. Far be it from me, nevertheless, to deny that the minimum visibile of 44" is much concerned in the several phenomena of colouration, colour-blindness, &c. And, apart from colouration, transparencies teach us thus much about their construction—that their molecular particles fall extremely short of the minimum visibile.

Based on the evidence of apparent extension (minimum formarum) is the doctrine of the cerebral realisation of sensational points, indicating a similar mechanical deportment of nervous structures. Impressions on two adjoining minimal areas, retinal or cutaneous, give rise to the mental impression of contact, and the excitation of several contiguous areas effects an idea of coherence or extension; such experiences could not obtain, according to the above dogma, excepting on the inference that the termination of afferent fibrillæ in the brain is a precise facsimile of their origin. Bernstein says, "The representation of the surface of the body is imprinted upon our brain," so that by experience or practice (which may signify a constant repetition of primary perceptions) the brain is capable of determining any points of the skin's surface that may be touched.[1] Professor R. S. Wyld writes: "In vision there is mapped out in the sensorium a true representation, though on a different scale, of the forms, motions, and relative sizes of external objects as they exist on the retina";[2] and he has submitted a diagram, explanatory of single and double vision, in which each retinal image is actually reproduced in the corpus quadrigeminum.[3] But, on the contrary, the idea (perception) of space or extension is as different from that of body (the sense of contact) as it is from that of a scarlet colour; it is true that a scarlet colour, like body, must have extension, but the two ideas are distinct (Locke). Moreover, since the idea of solid form (relievo) is contained by surfaces, and has been proved to be a secondary perception elsewhere, the idea of superficial extension must also be of a secondary nature. Wherefore the present proposition renders the anatomical identity of relation between the proximal and distal extremities of an afferent nerve another redundant additamentum to minute anatomy.

Nevertheless, in further elucidation of the subject, the contiguity of sentient impressions on peripheral nervous expansions is clearly a *sine qud non* in the constitution of an idea of extension; retinal images or sensory impressions must be arranged *in ordine* for the generation of the mental idea of coherence, although we deny their reception *in ordine* by the brain through the channels of primary perception. This will be obvious on reflection that the directional influence of a voluntary muscle upon neighbouring impressional areas varies by a regulated increment, according to their regular positional relation to the dynamic centre of secondary perception. It is maintained that all ideas of extension, whether definite or infinite, may be ultimately resolved into the appreciated movements occurring in exarthrodial and diarthrodial articulations in the tactile sense, or into unfettered ocular rotations in the case of vision; and, further, the coherence of extension is comprehended ultimately by a duly perceived aggregation of what we may designates a minima motoria.

(To be concluded.)

[1] Five Senses of Man, p. 37. 1876.
[2] Physics and Philosophy of the Senses, p. 465. 1875.
[3] Ibid., fig. 40, p. 224.

ABDOMINAL SECTION FOR PELVIC SUPPURATION.

BY WM. ALEX. MACKAY, M.B., C.M.

INES D——, aged twenty-four years, gives the following history. She has been married for four years and a half, and has given birth to three children. Two days after the birth of her last child she felt a severe pain in the region of the left ovary. Since then—that is, during the last six months—she has never been free from pain and feverishness. The menses have been completely suppressed throughout her illness; no treatment has given any relief; she has been losing flesh rapidly, and feels weaker every day.

When seen the patient presented a most emaciated appearance. On examination, a hard tumour fixed and painful to the touch, could be felt in the left iliac region, filling it up and extending nearly to the middle line forward, and up to the umbilicus. Per vaginam, a rounded mass, painful to the touch, was felt to the left of the uterus, and extending round behind it. Womb fixed; cervix hard. Bimanually, indistinct fluctuation was felt in the tumour, but there was no indication of its pointing anywhere. The patient bore this examination very badly, and was very hopeless of her condition. She was put on extract of malt and allowed to rest for a week, as she had come a long diligence journey. During the week her temperature was always above normal, and her pulse between 110 and 120. Urine free from albumen and normal in quantity. Heart and other organs healthy. Motions fairly regular, and presenting nothing of note.

A second examination of the tumour revealed nothing new, and on April 29th, 1884, the following operation was performed. I opened the abdomen in the middle line, beginning about midway between the umbilicus and the pubes; the incision was carried down two inches. On opening the peritoneum, the index-finger came immediately upon the uterus and roof of the pelvis, which was raised up so as to lie against the anterior abdominal wall, but was not adherent. The uterus was quite immovable, and fixed to a large swelling, which lay behind it and surrounded its left side. Deep fluctuation could be felt at a point about an inch behind and half an inch to the left of the left cornu of the uterus. The incision was enlarged upwards to get at this point, which with the whole pelvic roof was raised to within an inch of the umbilicus. With considerable difficulty a Wells' trocar was here pushed into the tumour, a sponge having been first placed immediately behind the intended opening. About fourteen ounces of pale-yellow pus immediately ran out through the tube. On withdrawing the trocar, a little blood and pus followed, and was caught up by the sponge. On introducing the index finger into the abscess cavity, it became apparent that the trocar had traversed quite one inch and a half of indurated tissue before it entered the cavity. After clearing away the blood and cleansing the abdomen with warm sponges, the opening into the abscess was secured by a continuous suture to the abdominal wall at the upper part of the incision. This was the most difficult part of the operation. It was a belaying down of the abdominal wall to the wall of the abscess, the latter being immovable. The rest of the abdominal incision being closed with silk sutures, a drainage-tube was passed into the abscess cavity and an iodoform dressing applied, with strips of plaster and a flannel binder. The anæsthetic employed was a mixture of chloroform and ether. A good deal of vomiting followed the operation, lasting till the evening of the next day.

April 30th: Temperature normal; pulse 104. Wound dressed. Ordered a little brandy in warm water for vomiting. —May 1st: Temperature normal; pulse 88. Had a good motion. Complains of slight pain throughout the abdomen. Wound dressed.—2nd: Temperature normal; pulse 90. Wound dressed. Discharge passes freely into the dressings around the tube.—3rd: Temperature normal; pulse 114. Patient feels very well, and has a good appetite. Wound dressed. Pus of a dark-red colour.—4th: Temperature

normal; pulse 100. Wound dressed. Pus smelling peculiarly.—5th: Temperature normal; pulse 100. Wound dressed. It is now evident that there is a communication between the intestine and the abscess cavity, as the discharge is mixed with fæces.—6th: Temperature normal; pulse 112. Patient excited and frightened, because she has felt while straining at stool that a good deal of fæcal matter comes by a tube and none by the anus. Wound dressed.—7th: Temperature 99·5°; pulse 114. The patient feels very well, and is not alarmed, as she has passed three motions by the anus and very little by the wound. Since the first passage of the fæcal matter by the tube the abdominal wound is carefully protected by an arrangement of mackintosh and adhesive plaster, and the attendant constantly renews the dressing around the mouth of the tube; also the abscess cavity is frequently syringed out with carbolic lotion.—12th: Temperature and pulse normal. Wound dressed; almost no discharge. Continuous suture removed. The abdominal incision is firmly healed. The patient eats and sleeps well.—21st: Drainage-tube removed. Cavity quite contracted. Patient sitting up in bed.

The woman went home restored to health on May 31st. Menstruation returned at the end of July and continued regular. A year after the operation I was told that the patient continued to enjoy perfect health.

Remarks.—That this case is an example of suppurating hæmatoma I think there can be little doubt; but a special interest is added by the communication, which occurred on the fourth day after operation, between the bowel and the abscess cavity. It is probable that we have here an illustration of the course of such abscesses as described by Dr. West, who says: "When suppuration takes place, the matter makes its way outwardly through the vagina or through the intestinal canal in almost all cases in which the inflammation is limited to the parts contained within the broad ligament." From the length of the illness, which lasted six months, it seems probable that the pus had begun to seek an outlet towards the bowel. On evacuating the abscess, the weakened part of the intestinal wall would yield towards the cavity, and finally give way when the patient strained at stool. No pus was at any time observed in the motions. The rapid progress toward complete recovery did not appear to be delayed by the complication which occurred.

Huelva, Spain.

CYST OF THE GREAT OMENTUM.

REMOVAL, RECOVERY.

BY J. C. GOODING, M.D.

MISS ——, in 1878, when aged eighteen years, first noticed a lump the size of a hen's egg low down in the right iliac region, which, at the monthly periods chiefly, was painful. It gradually enlarged upwards till, at the time of my first visit in August, 1879, it had attained the size of a cocoa-nut and reached two inches above and to the left of the umbilicus, and three inches below, extending back into the lumbar region. It was elastic, could be completely pushed across the abdomen to the left of the umbilicus, and pressed down to Poupart's ligament; there was most limitation to upward movement, and between it and the liver there was resonance. My first impression was that it was a renal growth, but the tumour could be moved away from the kidney without leaving any sense of void in the loin; it was freely movable in all directions, but less so from the ovarian site. The urine was healthy, and there was no constitutional disturbance. I diagnosed ovarian cyst with long pedicle. In March, 1880, the patient at my request saw Sir S. Wells, who wrote me that his impression was it was renal, but, having doubt, wished Sir W. Jenner to see the case with him, which he did a few days afterwards. The result of the consultation was that they both, "while doubting, inclined rather to the view of an ovarian tumour with a long pedicle than a renal cyst or tumour," and both agreed in advising, "in the absence of any urgent symptoms, no surgical interference."

During the summer of 1881 the patient began to suffer from sickness and occasional vomiting after meals, and a great deal of shooting and aching pain in and about the tumour. These symptoms much impaired her health; and interference, for which the patient was anxious, was determined on. The growth had now attained the size of a child's head of four years old, had equally enlarged without altering its relation to other parts, was as mobile as ever, and obviously contained fluid.

On April 27th, 1882, Mr. Cardew gave ether and Mr. C. J. Newton assisted me. When the patient was anæsthetised the tumour retreated so much under the hypochondrium that it was obviously not ovarian (a confirmation of the value of anæsthetics for abdominal diagnosis—so well known, but so seldom employed), a short incision into the peritoneal cavity, confirming this, was extended to the umbilicus, and disclosed a white cyst covered by peritoneum; this was scratched through so as to admit the finger, which was swept round, breaking down strong areolar tissue. On seizing the tumour with a vulsellum a clear fluid gushed out; then a most tedious process of separation, facilitated by holding the thin-walled cyst up against the light, was effected by scratching through dense cellular tissue, its closely fitting envelope. There was no pedicle, the tumour was embedded in folds of the omentum, having the transverse colon immediately below it. There was no hæmorrhage. The entire operation was conducted under carbolic acid spray—a practice, however, which I no longer follow.

The patient, very pallid and cold, but with fair pulse (60), was removed to bed, and after a couple of hours the extremities became warm. During the first night there was much pain referred to the left shoulder and back. For thirty-six hours there was continuous sickness. On the second day the temperature was 100° and the pulse 98-104. Barley-water and milk in small quantity were relished and retained. On the third day the temperature was natural, and the pulse 92. On the seventh day three sutures were removed, and the remainder on the tenth day; firm union had taken place. The progress to recovery continued uninterrupted, and the patient when last seen (September, 1883) was enjoying good health.

The tumour much resembled an hydatid cyst, but it was not of this nature. Its origin (obscure) might have been due to a severe blow in the abdomen sustained some months before.

Cheltenham.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. MARY'S HOSPITAL.

PARTIAL ENTEROCELE; GANGRENE; RECOVERY; REMARKS.

(Under the care of Mr. EDMUND OWEN.)

THE term here used to describe the hernia which was the cause of the symptoms in the following case is one which will probably find general acceptance. If our readers will refer to the report of the meetings at which the papers referred to (*vide infra* and page 314) were discussed, they will gain much information on the subject of this form of protrusion.

On November 30th, 1886, a spare man, aged fifty-seven years, was admitted with a strangulated femoral hernia on the left side, of the size of a large walnut. He vomited a good deal, but the ejecta had no stercoraceous odour; there was no tympanites and no hiccough, but the man was somewhat collapsed. He said that the hernia had been down generally during the past three winters, when his cough was bad, but that nearly the whole of it went away when the mild weather arrived; that there was, however, at the best of times, always a very small piece which did not go back. He said further that the hernia, in the larger mass, had been down for nearly a week, that for five days his bowels had not acted, and during that time he had been frequently sick, and in pain across the umbilicus. Without any difficulty Mr. Lloyd, the house-surgeon, returned the

chief part of the protrusion, and then applied an ice-bag to the small piece which resisted his efforts.

Mr. Owen saw the patient some hours after his admission, and finding him free of pain and nausea, and learning that the general improvement, which set in directly after the partial reduction of the hernia, was as real as it was apparent, he decided not to cut down upon the irreducible piece, which he took to be a nodule of omentum. That decision was justified; all went well; the bowels acted nearly every day; but still the small piece remained irreducible. On the tenth day in hospital the hernia began to pain, and the ice was entirely left off; and a week later an abscess was incised over the seat of the hernia, pus and fæces escaping. After this the local pain entirely passed away, but for some weeks a fæcal fistula kept on discharging. The opening eventually closed; the remnant of the hernia has disappeared, and the man is quite well, at any rate so far as his groin is concerned.

Littre gave various important indications for recognising strangulation of a diverticulum, or of a piece of the side of the intestine, all of which are illustrated in the case just recorded. Thus: The bowels continued to act during the progress of the attack, because the channel itself was not obstructed. The bowels were confined whilst the supplemental hernia was strangulated, but they began again to act directly that part was released, although the diverticulum, or the small piece of the side of the bowel, remained so tightly strangulated that it sloughed. The man had no hiccough or abdominal distension, nor did he vomit except on one occasion—that was before the chief mass was reduced. The permanent prolapse was particularly small, and, though it was persistently and tightly pinched, the general and local symptoms ran an unusually mild course.

The small irreducible part of this strangulated hernia was, without doubt, intestinal, for on the occurrence of gangrene and abscess fæces escaped when the tumour was incised. That the strangulation did not implicate the entire circumference of the intestine is evidenced by the fact that from the very day that the chief part of the strangulated mass was returned the bowels began again, and continued, to act naturally. Possibly the piece of bowel which sloughed was Meckel's diverticulum, or an adventitious diverticulum; possibly it was a piece of the side of the bowel. But that this particular feature in the case remained obscure is probably much to the advantage of the man himself. Mr. Owen said he was not of opinion that a clinical history is complete only when a necropsy is detailed.

On April 19th, 1886, Mr. Morgan read a paper on a case of strangulated hernia without complete obstruction of the bowel before the Medical Society of London,[1] and on December 14th last Mr. Treves chose the same subject for a communication to the Medico-Chirurgical Society,[2] and on each occasion reference was made to an essay which was read by Littre in 1700 at the Académie Royale des Sciences, in which the author described a fatal case of hernia which was probably strangulation of Meckel's diverticulum. By Littre's hernia, however, one now generally understands a partial hernia of the circumference of the bowel rather than of a diverticulum. But on this matter opinions differ; and with some surgeons the name of Richter is usually associated with that condition, Littre's name being connected with diverticular protrusions. Thus what should be a tolerably simple subject has become overburdened with proper names, and terminology has become indefinite. Mr. Owen ventured to express the opinion, therefore that in the interest of surgical literature in general, and of the student in particular, it is expedient that individual names be not associated with special kinds of hernia. The surgical archæologist may dissent from this proposition, but specialism in any branch of knowledge should tend always to simplification. Indeed, in the discussion of one of the excellent papers just referred to, Mr. Hulke is reported[3] as saying that he rather thought that Richter himself did not fully comprehend the matter with which his name is so honourably mentioned. Every surgical reader, however, can understand what is meant by a "lateral hernia of the bowel," and by a "hernia of a diverticulum." The former term, therefore, or the still more comprehensive one, "partial enterocele," is preferred by Mr. Owen as the heading to this report.

[1] THE LANCET, vol. i. 1886, p. 786. [2] Ibid., vol. ii. 1886, p. 1176.
[3] Ibid., vol. ii. 1886, p. 1177.

NEWCASTLE-ON-TYNE INFIRMARY.

HERNIA OF OVARY.

(Under the care of Dr. OLIVER.)

A WELL-DEVELOPED young girl, aged sixteen, a housemaid, was brought to the infirmary complaining of a painful swelling in the right groin. Ten days previously to this, when lifting a heavy pan, she felt something crack in the lower part of her abdomen. This was followed by a feeling of sickness, but she did not vomit. The bowels had been opened daily since the commencement of the illness. On examination, a tender, roundish swelling was found in the neighbourhood of Poupart's ligament on the right side, which was easily reduced. Three days after this, as the swelling had reappeared, she returned to the infirmary, having vomited a good deal. Walking was to her now a matter of great pain. She said that she suffered most pain when she lay on her left side, less when she lay on her right, but least of all when on her back. The swelling, which was about the size of a walnut, lay immediately under Poupart's ligament (right); it was soft, elastic, of firm consistence, and did not give one altogether the feeling of being intestine. It had been easily reduced in the first instance, but on now handling the swelling special notice was taken of the amount of pain which it caused, the sense of sickness complained of, the extreme pallor of the face, and the tendency to faintness. No impulse was detected in the swelling on coughing, nor in its reduction was there felt anything like a slip or a gurgle. It was regarded as a hernia of the ovary. On examination under chloroform, an ill-defined mass could be felt behind Poupart's ligament (right), which, on being displaced, fell into the pelvis to the right of the uterus. The uterus itself felt healthy, but to the right of it lay a round smooth mass about the size of a walnut freely movable, easily displaced in front of the uterus, and easily tilted upwards by and beyond the reach of the finger. A coil-like structure could be felt lying external to this smooth round mass as it lay in the pelvis, but whether it was a distended Fallopian tube or a portion of small intestine, it was impossible to say. The round mass was doubtless the right ovary. On the left side the ovary was felt to be about a quarter of the size of that on the right, while its Fallopian tube could be felt about the size of a quill. On one occasion after this, when the swelling reappeared in the groin, the ovary had evidently dragged down with it a portion of intestine, for in the reduction a gurgle was distinctly felt. The diagnostic signs of hernia of the ovary relied upon were—the dragging and pain felt by the patient when she lay on her left side, the side opposite the swelling; pain on movement of the limbs; pain of a sickening character on manipulation of the swelling; pallor of the countenance and tendency to faintness; the consistence of the swelling; and, in its reduction, absence of slip and gurgle. The house-physician, Mr. Waldy, had a proper truss made for the patient, since wearing which the displaced right ovary, still in all probability enlarged and prolapsed, has ceased to trouble her.

DUNDEE ROYAL INFIRMARY.

ACUTE SPORADIC CEREBRO-SPINAL MENINGITIS; DEATH ON THE FOURTH DAY; NECROPSY; REMARKS.

(Under the care of Dr. SINCLAIR.)

FOR the clinical record of the following case we are indebted to Mr. H. Hampden Pridie, house-surgeon; and for the notes of the necropsy to Mr. A. M. Stalker, pathologist to the infirmary.

Jessie P——, aged twenty-one, mill-worker, was admitted on the afternoon of August 14th, 1886, having been certified as suffering from typhus. There had been no typhus, however, in her neighbourhood for a long time, and there was no evidence obtained either on admission or subsequently of contact with typhus. Three days before admission, without any apparent cause in the shape of injury, overfatigue, or exposure to excessive heat, she had a rigor, followed soon after by great heat, loss of appetite, excessive vomiting, severe headache, and noisy delirium.

On admission the patient was very drowsy, and had a dusky aspect and flushed forehead. Pulse 124, bounding; respiration 28; temperature 101·4°. Tongue furred and

beginning to dry. Spleen distinctly enlarged. No abnormal physical signs in heart or lungs.

Next day, at Dr. Sinclair's visit at noon, she was insensible, and had been having convulsions since 6 A.M. The pupils were dilated and sluggish, the pulse was 120 and bounding, and the temperature 102°. The tongue was protruded, and bore marks of biting by the teeth. She was then ordered to have half a drachm of hydrate of chloral by enema, which was to be repeated in two hours if necessary, and, if still unable to swallow in the afternoon, she was to be fed by pancreatised enemata. At ten minutes past 3 P.M. she died.

Necropsy.—On opening the dura mater, a thin layer of yellow lymph was found to be uniformly distributed all over the pia mater. No evidence of extension from the middle ear or from any part of the temporal bones. The spinal canal was opened, and lymph, continuous with that on the brain, was found all down the cord, most markedly about the middle of the dorsal vertebræ. The cranial and vertebral bones were healthy. The lungs were congested. Abdomen: Intestines congested and moderately full of semi-fluid fæces. Careful examination showed no lesions of Peyer's patches. The spleen was enlarged and pulpy.

Remarks by Dr. SINCLAIR.—There can, I think, be no doubt that this case was an example of the more severe type of cerebro-spinal meningitis. The initial and subsequent symptoms were sudden and overwhelming; the patient was evidently beyond hope when she was admitted on the third day; and the post-mortem examination showed that both the cerebral and spinal meninges had been acutely inflamed. And there can be as little doubt that the case was isolated and unassociated with any epidemic outbreak, because there had been no similar case in the neighbourhood for a long time before, and I have not been able to find any trace of a similar case up till now (Jan. 27th, 1887). No traumatic cause could be ascertained after a very careful and exhaustive inquiry. The clinical history is singularly complete except in the one respect of the absence of the eruption, which is so often associated with this interesting and fatal malady. Isolated as it is, I think it worthy of being placed on record, as a contribution to our knowledge of a very rare disease.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

"Induration" of Hunterian Chancres in the Female.—Actinomycosis Hominis.

AN ordinary meeting of this Society took place on Tuesday last, Mr. G. D. Pollock, F.R.C.S., President, in the chair.

Mr. W. E. CANT contributed a paper on some Clinical Observations on "Induration" in the Primary Lesion of Syphilis in Women. (Communicated by Mr. Holmes.) The following results were founded on about 3300 cases examined in the Royal Albert Hospital, Devonport, during a period of six and a half years. In contradistinction to the generally accepted fact that in men induration is as a rule well marked, it is so in women far less generally. The induration, which is described as being circumscribed, limited to the base of the sore, and clearly marked off from the surrounding tissue in men, in women is, about as often as not, diffused a considerable distance into the tissues around, often very widely, not sharply defined from the surrounding tissues, nor circumscribed in the base of the sore itself. The most typical form of primary sore with its induration, resembling a disc of cartilage set in surrounding soft structures, described as being frequent in men, is seldom met with in women. Every variety as to the degree of development of the induration is met with in women; but there is a large proportion in which it is very slight (about one-third). In some of these slight cases it is impossible to affirm that there is any thickening at all present, and there is a small number in which none exists throughout the whole course of the sore. Induration is present in the early stage of the sore only in a small proportion of cases. The time of its occurrence in the course of the sore varies greatly; it may occur at almost any period of its course. It becomes most marked and developed towards the middle and latter part in many cases. Tables of cases of primary sores, grouped according to their clinical character, and showing "when first apparent," "characters at earliest period," &c., and also of five cases of infecting primary sore in which there was no induration, were appended to the paper.—Dr. C. R. DRYSDALE said the subject of induration at the commencement of syphilis had at times become much confused. He had gathered much the same impression as Mr. Cant, in his observations made at a small lock hospital. The initial chancre might be but little indurated in women. The tissues in the female genital organs were rather different from those of the male, and this condition probably influenced the occurrence of induration. In a hard chancre of the lip in a woman the induration might be quite "wooden." A large number of cases in the male might exhibit but slight induration. In his own experience, of 241 cases four-fifths occurred on the labia majora and minora. The initial hard sore might occur on the os uteri. He had not seen one on the vagina.—Mr. HARRISON CRIPPS hardly agreed with Mr. Cant that the locality made no difference in the occurrence of induration. He thought position was everything. On the lip induration could easily develop. In chancre on the finger there might be absence of induration, even from beginning to end. Hunterian sores on the face and fingers indeed were generally free from induration.—Mr. T. HOLMES said the paper differed from most records of observations in being a record simply of facts. No mere opinion was expressed in the paper. Works of syphilographers gave a record of general impressions, not of actual facts of which notes were made at the time. He believed that the situations of the sores were given in the tables appended to the paper. The conclusions of the author were in accord with his own experience. He considered it a matter of regret that the Contagious Diseases Act had been repealed.—Mr. R. W. PARKER asked, if induration was not the test of a chancre, what was the test? What is the characteristic feature of a chancre? How much of the features was due to mere irritation, and how much to the action of the true syphilitic virus?—Dr. C. R. DRYSDALE said that it was not to be supposed that absence of induration meant identity of the Hunterian sore with a soft one.—Mr. CANT, in reply, said the situations of the sores were given in the paper; two occurred on the os uteri, and one on the vaginal wall. Some of the sores on the buttock were indurated—this in opposition to Mr. Cripps. Induration was the best character of a syphilitic chancre when present. His paper did not, however, deal with the characters of syphilitic sores.

Dr. R. G. HEBB contributed a case of Actinomycosis Hominis. (Communicated by Dr. Sturges.) A boy, aged eleven, was admitted into the Westminster Hospital on March 18th, 1886. He had suffered for a month previously from pains in the limbs, diarrhœa, vomiting, and "feverishness." On admission the most prominent symptoms were those of lung consolidation and pleural effusion, for which he was tapped twice. Soon afterwards pyæmic symptoms developed, and the patient died on June 2nd. The post-mortem examination disclosed abscesses of the brain and meningitis, pneumonia, excavation of the lungs, and suppurative pleuritis. A large vegetation was found on the wall of the right auricle of the heart, and in the liver an abscess and many areas of caseation. On microscopical examination of the liver, there were found numerous pigmented cells, many of which formed the centre for the departure of radiating filaments. The conjunction of these two factors gave rise to the appearance of a definite organism, for which the name of actinomycoces was adopted. In the brain and lungs collections of cocci only were found.—Dr. STURGES testified that Dr. Hebb had taken an immense deal of pains about the pathological preparations. The paper read by Dr. John Harley tried to show that the morbid appearances were due to tubercle, but he could not agree with this view. The boy came in with pneumonia, and developed hectic fever and an empyema. Three things were clear: first the pneumonia, then the wasting fever, and there were also signs in the liver, which was explored two or three times with the aspirator. There were now at least three cases of this disease starting in the lung. The clinical aspect was alike in the three cases—Israel's, Markham Skeritt's, and the present one; and a diagnosis ought to be possible from the clinical characters. The present case was shorter and acuter than the other two; the duration was two or three months. The onset was gradual, the symptoms being those of diarrhœa and loss of appetite preceding the signs of pneumonia.—Dr. T. D. ACLAND said the disease was not

nearly so rare as Dr. Sturges thought it to be. He had seen no less than four cases himself. The disease was very common in cattle, and thirty cases of disease of the lung in human beings had been reported in Europe. In Dr. Hebb's specimen the organism did not seem to be the central point of the morbid process. It seemed as though the organisms were lying in holes bounded by fibrous tissue. He had cut sections of Dr. Hebb's specimen without being able to find any organism. Whether the disease was caused by the organism he could not say. Naked-eye appearances were not sufficient to diagnose the disease if it were called actinomycosis.—Dr. HEBB said a similar case was reported by Vacchetta in the *Veterinary Journal* of Milan for 1882; it occurred in a dog, and was thought to be a sarcoma of the lower jaw. He thought that Dr. Acland supposed that the sections were only three in number on which the diagnosis had been made.

MEDICAL SOCIETY OF LONDON.

Partial Enterocele.—Parotitis after Abdominal Operation.—Rupture of Aneurysm into Pericardium.

AN ordinary meeting of this Society was held on Monday last, Mr. R. Brudenell Carter, F.R.C.S., President, in the chair.

Mr. EDMUND OWEN read a paper on Littre's hernia, which appears in full on page 311.—Mr. BRUDENELL CARTER said the French were not alone in varying the spelling of their proper names. He objected to the use of proper names to designate diseases—a method serving to confuse students.—Dr. C. J. HARE said the nomenclature of disease as issued by the College of Physicians went far in the direction of not using proper names for designating diseases, but no doubt would go further if representation were made on the matter to the Registrar.—Mr. F. TREVES referred to the diagnosis, which was not perfectly clear from the symptoms. The extreme rarity of hernial diverticula on the left side of the body was against the diagnosis. The influence of the ice-bag in producing the abscess was of interest. He believed that the prolonged use of the ice-bag might cause abscess and gangrene. As to Littre's hernia this much might be said, that it was doubtful whether Littre had ever seen a case of partial enterocele. Richter's hernia was the best name to designate the hernia by, since he was the first actually to describe it.—Mr. STEPHEN PAGET referred to a case of incarcerated hernia in a lady which was treated with an ice-bag and followed by an abscess.—Mr. WALTER PYE considered that the phrase "lateral enterocele" was barren of meaning.—Mr. DAVIES-COLLEY asked what evidence there was that this was not an ordinary femoral hernia injured by Gimbernat's ligament; the abscess had slowly come to the surface through the crural canal.—Mr. J. H. MORGAN inquired whether there was any indication of the portion of the bowel that had been the seat of strangulation.—Mr. J. BLACK suggested that iced applications in peritonitis might increase the shock.—Mr. E. OWEN, in reply, maintained that it was a partial, not complete, obstruction of the bowel. The ileum on the side away from the mesentery was the part of the bowel affected.

Mr. S. PAGET read a paper on 101 cases of Parotitis after Injury or Disease of the Abdomen or Pelvis. He referred to Graves' 30th Clinical Lecture, on the Connexion between Diseases of Different Organs. He also referred to the fact that abscess of the kidneys and of the muscular substance of the heart is much more common in pyæmia after acute necrosis than in pyæmia after amputation. In 18 cases of pyæmia after acute necrosis, 10 had abscess of the heart, and 11 had abscess or infarction of the kidney. But in 140 cases of pyæmia after amputation, only 1 had abscess of the heart, and not one had abscess of the kidney. Another morbid sequence of a similar kind is shown in the fact that abscess of the liver or of the spleen is much more common in pyæmia after injury involving the medulla of bone, than in pyæmia after injury involving only the soft parts. In 67 cases of pyæmia after injury involving only the soft parts, 4 had abscess of the liver, and 3 had abscess of the spleen. But in 217 cases of pyæmia after injury involving the medulla of bone, 56 had abscess of the liver, and 28 had abscess of the spleen. These morbid sequences are of very great interest, as revealing relations between remote organs which are never shown in health. Physiology knows of no connexion between the periosteum, the heart, and the kidneys; or between the medulla of bone, the spleen, and the liver. Another morbid sequence is parotitis after injury or disease of the abdomen or pelvis. Out of 101 cases, 10 followed injury or disease of the urinary tract; 18 followed injury or disease of the alimentary canal; 23 followed injury or disease of the abdominal wall, subperitoneal or pelvic cellular tissue, or peritoneum; and 50 followed injury or disease or temporary derangement of the generative organs. Under "temporary derangement" Mr. Paget included such causes as slight injuries, menstruation, &c. Parotitis, after injury of the *extremities*, is always part and parcel of a true general pyæmia, with other secondary inflammations elsewhere. But this parotitis after abdominal or pelvic lesions was, in 93 cases out of 101, an isolated event, unaccompanied by any other inflammation like itself. In only 15 of the 101 recorded cases was there distinct mention of "septic symptoms," "septicæmia," or "pyæmia." Of the 101 cases, 37 died. But of these 37, 3 were over eighty, 3 had cancer, 2 had perforation, 2 had strangulated hernia; others had acute peritonitis, severe injuries, septicæmia, or pyæmia. Thus the danger is not in the parotitis itself, but in the primary lesion which causes it. This form of parotitis has no period of incubation; it has been observed on the first day after the primary lesion, and on the nineteenth, and on the intermediate days also; to say nothing of a case where it came on the morning of the day fixed for operation. It seems to come later when it is due to delivery or abortion than when it is due to operations on the generative organs. The onset of this form of parotitis is rarely attended by much disturbance of the general condition of the patient. Rigors are mentioned only in 4 cases; delirium or puerperal mania in 6 cases. In the great majority of cases there is only slight rise of temperature, no rigors, no high fever. Such cases have been well described by Dr. Macdonald of Edinburgh, Dr. Goodell of Philadelphia, and many others. As regards the termination of this parotitis, by resolution or by suppuration, there are only 78 cases which give information on this point. Of these, 45 went on to suppuration and 24 died; whereas of the 33 that were resolved without suppuration only 1 died, and she died of cancer a month after colotomy. Death in the fatal cases was due not to the suppuration of the parotid but to old age, cancer, perforation of the bowel, &c., or to septicæmia or pyæmia. They did not die because the parotitis went on to suppuration, but it went on to suppuration because they were going to die. Mr. Paget suggested that this suppuration of the parotid in cases of pyæmia might be allied to those cases of pyæmia after compound fracture where suppuration occurs round simple fractures inflicted at the same time as the compound fracture, and to the experiments of Chauveau, Loeffler, and others, who produced simple fractures in animals, then injected septic fluids into their veins, and thus produced suppuration round the simple fractures. Mr. Paget spoke of the surgical features in some cases of this form of parotitis, and of the treatment by belladonna and by incision, according to the old rule, "Parotitides omnes ante maturitatem aperiendæ." He had lately, by the kindness of Mr. Knowsley Thornton, made a post-mortem in the case of a woman who died ten days after the removal of a very large sarcoma from the mesentery. Swelling of the left parotid gland set in three days before death. The operation had been one of great severity, and she never thoroughly rallied from it. Necropsy (seven hours after death): No rigidity of limbs or of neck; jaws tightly clenched, and could not be opened. Abdomen flat and collapsed; operation wound healed. Firm non-fluctuating swelling of left parotid. Pus wells freely into the mouth, when pressure is made over the gland. The mucous membrane of the mouth is soft, clean, and wholly free from sordes or ulceration. The mouth of the duct is just marked by one or two tiny points of hæmorrhage under the mucous membrane. A bristle passes freely up the duct. The skin and loose cellular tissue over the parotid and in the anterior triangle of the neck are œdematous and full of serum; the lymphatic glands at the angle of the jaw and in the neck are much enlarged and soft. On section, the parotid is found everywhere evenly infiltrated, not with pus, but with reddish, slightly turbid serous fluid, looking like the cut surface of a spleen. There is no pus in the gland itself, but just at the proximal end of the duct, where it leaves the gland, are two or three drops of healthy pus and a minute calculus no bigger than a millet-seed. There is no general peritonitis, but a small circumscribed abscess at the seat of the operation. Spleen large and diffluent. No marked lesions elsewhere. The

microscope showed the acini and lymph spaces of the gland invaded by masses of small round cells (lymph cells), which here and there could be seen inside the acini and ducts. The gland tissue was broken up and confused by these masses of cells; but the interlobular septa of fibrous tissue were for the most part hardly changed at all. It was a true inflammation of the gland tissue itself. As to any micro-organism, Rosenbach has grown colonies of staphylococcus pyogenes aureus from the purulent infiltration of the parotid, in a man who died with "acute septic peritonitis," after operation for strangulated hernia. But this micro-organism has no specific value. In conclusion, Mr. Paget observed that this form of parotitis, which follows abdominal or pelvic injury or disease, is, in many ways, of great interest. In 93 cases out of 101 it was an isolated event. It has no period of incubation, and no regular course. It may subside and recur and subside again, or may attend each pregnancy or each menstruation. It is rarely marked by much fever or disturbance of the system; indeed, in many cases it is "critical" rather than "symptomatic"; and out of 33 cases where it was resolved without suppuration, only 1 died, and she died of cancer. In only 15 cases is mention made of "septicæmia" or "pyæmia." Neither is it due to the spreading of inflammation from a parched and sordid mouth up the duct into the gland. In only one or two cases was the socia parotidis involved at all; nor are the mouths of patients with abdominal or pelvic lesions more parched than those of other patients. It is a pure theory, not supported by any evidence. Nor is it due to inflammation of the lymphatic tissue in the substance of the parotid. The characters and histories of the case render such a view impossible. Even although some of the cases are best explained in one or other of these ways, there are others which cannot thus be explained. But there are many reasons for believing that the reflex nervous system may, at least in part, be a cause of this parotitis. The influence of the nervous system on the salivary glands, both reflex and direct, is familiar to all. Experimentally, Paulow has found that if a loop of intestine be kept drawn out from the abdomen of a dog, the action of the gustatory nerve is inhibited, and the secretion of saliva is checked or arrested, until the loop of intestine is put back. The observations of Pasternatski on the changes of the pupils during various diseases are also of interest in this connexion. Now, if the same lesion produces salivation in one patient, arrest of salivary secretion in another, and swelling of the salivary glands in a third, must we not conclude that all three are different workings of the same agent? Thus, gastritis may cause salivation, or arrest of saliva, or parotitis. So, too, parotitis may follow gastric ulcer, gastrostomy (2 cases), duodenal ulcer, enterostomy (2 cases), herniotomy (5 cases), hepatic abscess, abdominal cancer (2 cases), typhlitis, colotomy, the removal of abdominal or umbilical tumours (3 cases), penetrating wound of the abdominal wall, and peritonitis (8 cases). It has also followed division of stricture of rectum, and operation for hæmorrhoids; and with these last two cases may be compared the fact that salivation has been observed as an early symptom of cancer of the rectum. Again, derangement of the generative organs, like derangement of the alimentary canal, may be followed either by salivation, or by arrest of saliva, or by swelling of the salivary glands. The salivation of pregnant women, and their longings for sapid food, are well known; and the same thing may occur during menstruation. Dr. Goodell gives two cases: one, of excessive salivation just before and during menstruation; the other, of a lady with a congested and tender left ovary, in whom the left parotid gland did not secrete during menstruation, so that the mouth and fauces on that side remained dry and painful. So, too, parotitis has been known to accompany each pregnancy, and to accompany or replace the menstrual flows (two cases). It has followed various trivial derangements of the generative organs (4 cases), pelvic abscess or hæmatocele (4 cases), operation for lacerated cervix (4 cases), other operations on vagina or uterus (4 cases), delivery or abortion (8 cases), the menopause (2 cases), and ovariotomy or oöphorectomy (27 cases). So, too, after lesions of the urinary passages, parotitis has followed the use of the catheter (3 cases), the use of the sound, renal abscess, and cystitis (5 cases). It is certain that, though some of these cases were due to septicæmia or pyæmia, others were not. Surely they are analogous to the retention or suppression of urine which so often follows abdominal and pelvic lesions. They are not due to a mere reflex spasm of the mouth of the duct, such as Verneuil describes; for this, as shown by many cases collected by M. Terrier, causes a mere passive dilatation of the gland, which alters with every meal, never disturbs the general health, never suppurates, and disappears when a probe or catheter is passed up the duct. Rather, while admitting the influence of the constitutional condition of the patient, we must believe that in many of these cases of parotitis there is a reflex vaso-motor constriction of the arteries of the gland itself, which, as Mr. Knaggs of Huddersfield has suggested, may be followed by a reaction going on to parotitis.—Mr. ALBAN DORAN discussed the question of the mode of origin of the parotitis. It could not be said that it was always a question of some connexion between the generative organs and the parotid gland, because injury of other parts of the abdomen was followed by parotitis. He examined the theories of simple reflex action, local septic infection, and mere constitutional debility, with attendant local conditions about the opening of the duct of the parotid into the mouth.—Mr. W. A. MEREDITH raised the question whether in parotitis after ovariotomy the parotitis occurred on the same side of the body as that whence the ovarian tumour was removed. In one case of his own the relationship was crossed—the right ovary and the left parotid.

Mr. HUGH SMITH read a case of Rupture of Aortic Aneurysm into the Pericardium. It occurred in a washerwoman aged forty-two, who died whilst working at the washtub. The specimen was exhibited, and showed dilatation of the first two parts of the aortic arch; the third part of the arch showed a saccular aneurysm, which opened into the pericardium by a rent three-quarters of an inch in length; as much as fifteen ounces of fluid and clotted blood were found in the pericardium. There was collapse of the left lung. During life signs of consolidation were noted at the apex of the left lung, but there were no laryngeal or pupillary signs.—Mr. MARMADUKE SHEILD related cases of aneurysm of the aorta in which the patients continued to go about doing their work till death occurred.—Mr. J. BLACK considered it of interest that the aneurysm should have originated in the third part of the aorta and yet have burst into the pericardium.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

AT a meeting held on January 21st, Dr. Septimus Gibbon in the chair,

Dr. C. E. SAUNDERS read a paper on "Legislation for the Purification of Rivers, and its failure." Dr. Saunders traced the abortive attempts at legislation up to the time of the passing of the Rivers Pollution Prevention Act of 1876. He showed that this Act had been scarcely better than a dead letter; that in eight years legal action to enforce its provisions had been taken only in fifty-six cases; in these, twenty-six orders had been made to restrain pollution, but a great number of such orders had never been actively enforced. Of the twenty-six orders, twelve had been obtained at the instance of two authorities. Out of the fifty-nine County Court circuits in England and Wales, in only twenty-seven had proceedings been taken; in fourteen of them there had only been one case each. No less than nineteen out of the fifty-six cases were prosecutions against the sanitary authority, the very persons to whom the exclusive carrying out of the Act is entrusted. As to any spontaneous action to prevent pollution, the rivers bear testimony of failure in that direction. Dr. Saunders considered that trade interests militated against any effective legislation, and deprecated making manufacturing pollutions the chief object of prevention, these being, in his opinion, of far less consequence from a health point of view than sewage pollutions. He, however, quoted the opinions of the Rivers Pollution Commissioners, which show that "there is not one trade pollution which cannot be kept out of the streams altogether, or so purified before admission as to deprive it of its noxious character, and this without unduly interfering with manufacturing operations, but even in some instances with a distinct profit to the manufacturers." Some streams are so filthy that they are even unfit for manufacturing purposes, and the value of clean river water in such cases is estimated by manufacturers at from £50 to £1000 a year. The author urged the importance of attacking the very filth-beginnings of rivers—sewage ditches; and pointed out the good effects

this would have on general sanitation, as well as on river purity, especially adhering to the old view, that diphtheria is largely, if not entirely, a filth disease. He next gave the heads of a Bill which had been drafted by Mr. Willis Bund, which it was intended to introduce into Parliament at the earliest opportunity. This Bill makes it obligatory, instead of permissive, on the sanitary authority to prosecute offenders against its provisions, and if they (the sanitary authority) fail to institute, or, having instituted, fail to prosecute with due diligence, then any person having a legal right to make complaint may apply to the judge of the County Court for leave to prosecute in the name and at the cost of the sanitary authority. Dr. Saunders then sketched the machinery by which any future Act should be carried out, and advocated the establishment of a central authority, having no other function whatever than that of attending to river purification, looking to the medical officers of health of the various districts for detailed and periodical information. Dr. Saunders concluded his paper with the following remarks: "The policy of 'pass-it-on' is too great a temptation to put in the way of local sanitary authorities, for although they suffer in their turn, still it is convenient to get rid of their sewage, and the river is a costless and convenient vehicle. If I might venture to paraphrase a verse of Horace I should say—

'Sanitas exspectat dum amnis defæcat .....'

And unless more effective legislation is provided in the future than there has been in the past, one may find an application to the completion of the line and couplet—

..... 'at ille
Labitur et labetur, in omne volubilis ævum.'"

In the discussion which followed, Drs. Gibbon, Swete, and Woodford took part.

MIDLAND MEDICAL SOCIETY.

A MEETING of the Society was held on Jan. 19th, Mr LLOYD OWEN, F.R.C.S.I., President, in the chair.

Fracture of Spine.—Dr. SUCKLING showed a youth, aged eighteen, who at the end of last September had fallen twice upon his back. When seen four days after the second fall he was unable to stand, but could move his legs when in the recumbent position; he was unable to turn over in bed; had girdle pains in the upper lumbar region and shooting pains over the iliac bones. There was no anæsthesia, no actual paralysis, no bladder trouble; but the first and second lumbar spines were prominent, and great pain was elicited on light percussion over them. The right cremasteric reflex was lost, and the temperature varied from 99° to 102° for a week after admission. Under treatment by a plaster jacket these symptoms have now almost entirely disappeared. Dr. Suckling considered that there had been a fracture through the arches of one or more of the lumbar vertebræ with irritation of the last dorsal and first lumbar nerves.

Meckel's Diverticulum.—Mr. A. F. CLAY showed a specimen of Meckel's diverticulum from a girl aged thirteen. She had swallowed a number of plum-stones, and for the removal of these had taken strong purgatives. When first seen by Mr. Clay, ten days after swallowing the stones, she was suffering from peritonitis and obstruction. He opened the abdomen in the middle line and found a quantity of purulent fluid in the peritoneum, the intestines being matted together. The peritoneum was washed out, and a distended piece of intestine opened and stitched to the wound. The patient died from exhaustion thirty-six hours after the operation. At the post-mortem examination a Meckel's diverticulum was found with its ligament attached to the mesentery; a piece of the ileum below this had got under the loop, and was firmly strangulated, ulceration and perforation having taken place.

Dermoid Cyst of Ovary.—Dr. MALINS showed an ovarian cyst containing a quantity of oily material that solidified on its removal from the body, and a mass of hair.

Enlarged Ovary.—Dr. MALINS also showed an enlarged and cystic ovary from a patient aged twenty-five. Both these cases had been subjected to operation, and both had recovered without a bad symptom.

Vesical Calculi.—Mr. HASLAM showed twelve uric acid calculi, weighing altogether one ounce and three-quarters, that had been removed from the bladder of a female subject in the Queen's College dissecting-room. The bladder was much hypertrophied, but nothing was known of the previous history of the case.

Dr. FOXWELL read a paper on Acute Peritonitis in its Medical Aspect.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

THE fourth meeting of the session was held in the Faculty Hall on Jan. 26th, Dr. Samuel Sloan, President, in the chair.

The PRESIDENT exhibited a model of the Incubator in use at the Maternity, and made some remarks upon the current experiment with Triplets.

Dr. MURDOCH CAMERON showed a Fœtus at the sixth week with Membranes, &c.; and also a Fœtus at the fourth week, with Amnion, Chorion, and remains of Umbilical Vesicle.

A Review of Thirteen Years' Private (Obstetric) Practice.—The adjourned discussion of Dr. J. K. Kelly's paper was then taken up by Mr. J. S. NAIRNE, who said Dr. Kelly was fortunate in having had no cases wherein delivery had not been possible by means of forceps. He could not imagine such an amount of distensibility as that contended for compatible with a healthy pelvis. He had never observed any "erection of the hip" during labour. Nevertheless, the pelvis was normally capable of a slight amount of distensibility; but he thought the joint most capable of it was the lumbo-sacral, which allowed, certainly not a *dilatation*, but an adjustment of fœtus to the pelvis. He objected to, and repelled, Dr. Kelly's views as to the occurrence of ruptured perineum to such an extent as to require perineorrhaphy.—Dr. PARK objected to "bad nursing" being accepted as an efficient cause of death post partum, and to Dr. Kelly's wholesale condemnation of ergot, especially for hemorrhage, and thought he had been extremely lucky in never having had either a case requiring craniotomy or a case of death from post-partum hemorrhage.—Dr. W. L. REID thought Dr. Kelly's practice wrong in respect of rupture of the perineum, and that it was dangerous practice to apply the straight forceps at the pelvic brim. He also believed first labours to be more dangerous than subsequent ones.—Dr. ABRAHAM WALLACE said that the luxation of the lumbo-sacral articulation during labour had been drawn attention to before. He thought such an amount of general pelvic distensibility as Dr. Kelly contended for was not according to fact.—Dr. OLIPHANT thought moderate ruptures healed very well without stitching.—Dr. SLOAN thought straight forceps inadequate for use at the pelvic brim, and that a double-curved instrument should always be used. He places his pad somewhat higher than "over" the uterus, and administers ergot as a routine, as it kept the uterus retracted. He had observed distensibility of a marked kind only in one case, and in it a firm binder had to be adjusted post partum, in order to enable the patient to walk comfortably. He did not reck on rupture of the fourchette as rupture of the perineum, as that occurred in almost every case. He considered there were three degrees of perineal rupture—viz, 1. Where a few fibres only were torn. 2. Where it went within a quarter to half an inch of the anus; this should be stitched *at once* thoroughly. 3. Where it passes through the anus, when, as a matter of course, stitching is necessary.—Dr. KELLY, in reply, adhered generally to the positions contended for in his paper.

Dr. GEO. HALKET then read a paper on the Obstetrical and Gynæcological Cliniques of Berlin and Vienna, which was listened to with great attention, and frequently elicited the applause of the Fellows. He also exhibited the obstetrical and gynæcological instruments in common use at Vienna.

ROTHERHAM HOSPITAL.—The annual general meeting of the subscribers to this institution was held on the 27th ult., when the committee reported that the total number of patients during 1886 was 4092, of whom 189 were in-patients and 3903 out-patients. The receipts amounted to £1571, and the expenditure to 1493. The new ward now in course of erection is almost completed, and as when it is occupied a larger income will be necessary, the committee appeal for increased support.

AT the annual meeting of the subscribers to the Tavistock Dispensary on the 25th ult., it was resolved to erect a cottage hospital in connexion with the institution.

Reviews and Notices of Books.

The Surgeon's Pocket-book. An Essay on the best Treatment of Wounded in War. Especially adapted for the Public Medical Services. By Surgeon-Major J. H. PORTER, late Assistant Professor of Military Surgery, Army Medical School, Netley. Third Edition. Revised and edited by Brigade Surgeon C. H. Y. GODWIN, Medical Staff, Assistant Professor of Military Surgery, Army Medical School, Netley, late Medical Officer of the Royal Arsenal, Woolwich. London: Griffin and Co. 1887.

THE basis of this work was originally an essay selected for the prize offered by Her Majesty the Queen of Prussia and Empress of Germany on the "Practical Treatment of the Wounded in War." The adjudicators were Professors Billroth of Vienna, Baron von Langenbeck of Berlin, and Socin of Basle. The first edition was published in 1875, the second in 1879, with a preface by its author dated Cabul, in September of that year, where, to the great loss and grief of the army in Afghanistan, Surgeon-Major Porter soon afterwards perished of pneumonia. The present, or third edition, is in many respects another book altogether. It possesses some historical sort of interest in this respect, that it enables one to trace the progress and changes that military surgery has undergone in the interval. The first edition received the stamp of official recognition in the "Précis of Medical Arrangements," published for the guidance of medical officers in the Afghan campaign. The present editor—Brigade Surgeon Godwin—has introduced so much that is new, practical, and in our opinion sound, that we can without affectation recommend this "Surgeon's Pocket-book" as an invaluable guide to all engaged, or likely to be engaged, in field medical service; in fact, we do not know of any other book of the kind that contains the same amount of pertinent information in the same compass. The key to the changes he has effected is to be found in the substitution of antiseptic for "antiphlogistic" in the treatment of wounds and injuries. The amount of revision that the book has undergone and the new matter that has been added will be more easily appreciated by examining these a little in detail. The following may be taken as samples At page 2 a stretcher section is described. At page 17, *et seq.*, a clear and correct précis is given of the present arrangements in the army for service in the field (illustrated by the frontispiece), which is likely to prove really useful. At page 22 there are a few new remarks on "shock." At page 41 there is a short paragraph on "fat-embolism." Then follows a brief account of the theory of Listerism, with details for wound treatment in general and remarks on the chief antiseptics. At page 49 the treatment of special wounds, or those which have already taken on unhealthy action, is given, followed by Reyher's experiences and rules for treatment of gunshot injuries. At page 57 Surgeon-General Cammerer's experience in Roumania during the last Russo-Turkish war is given. The lesson to be learnt from that experience is that his success should impress the importance of surgeons at different hospitals on a long line of communications not losing heart because wounds come to them septic from exposure and inattention. There is some new matter under the head of wounds of the abdomen: for instance, at page 102, in the way of suggestion of free incision in diffuse peritonitis; and at page 103, regarding the question of laparotomy in injuries of the abdomen where viscera are injured, and where foreign bodies have penetrated and have to be removed. At page 120 some rules are offered for guidance respecting gunshot fractures of the femur, where the situation, and especially the factor of rest afterwards greatly influence the treatment. It is pointed out how nearly hopeless it is to try to save the limb if the patient has to be carried day after day, &c. At page 232 there is a useful table of water rations required for man and animals; and a typical war ration as a guide for medical officers, followed by excellent and precise information regarding air-space and ventilation. Considerations of space compel us to omit by far the larger number of revisions of and additions to the text. The four appendices are new, and contain some excellent formulæ and useful information. The third contains a translation of the orders recently issued to the Medical Department of the German Army, which is calculated to afford medical officers—serving in India for instance—useful hints of what to do when suddenly ordered to prepare for a flying column, and so forth.

Sanitary Examinations of Water, Air, and Food. A Vademecum for the Medical Officer of Health. With 110 illustrations. By CORNELIUS B. FOX, M.D., F.R.C.P. Lond., formerly Medical Officer of Health of East, Central, and South Essex. Second Edition. London: J. and A. Churchill. 1886.

DURING the eight years that have passed since the publication of the first edition of Dr. Cornelius Fox's book much valuable labour has been devoted to sanitary science and many new methods have been described. Dr. Fox has industriously studied these modern methods, and in the present edition gives us the benefit of his work. A considerable portion of this book is new, and all the leading authorities have evidently been consulted. In the section devoted to water, the most important addition is a clear and well-illustrated description of the biological methods, chiefly founded on the researches of Koch, which have attracted so much attention of late years. The field is promising, and already a crop of useful results has been gathered by Dr. Percy Frankland, Dr. Tidy, and others; but as yet no certain inferences can be founded upon the experiments, for bacteriology is still in its infancy. The influence of bacteria in nitrification and denitrification might with advantage have received more notice. To the latter process, a very important factor in the destruction of sewage matters in river water, Dr. Fox hardly alludes, and we gather from some words on page 100 that he has not read or has misunderstood the interesting results arrived at by Dr. Angus Smith in one of the latest, if not the latest, researches of his useful life. In the presence of excess of sewage, nitrates are rapidly reduced, the nitrogen escaping as gas. As in so many other cases in chemistry, oxidation and reduction seem to go on simultaneously. A section is given to the very important question of dissolved oxygen, about which, as yet, we have by no means heard the last word. Schützenbergen's process, based on the use of sodium hyposulphite (the true hyposulphite $Na\,SO_3$, and not the thiosulphate $Na_2S_2O_3$ commonly known by the name), is described with sufficient clearness. In skilful hands it is simple and satisfactory, but Dr. Fox does not sufficiently insist on the absolute necessity of working quickly and excluding even momentary exposure of the sample to the air. The velocity with which water takes oxygen from the air is marvellous, and the neglect of proper precautions for the exclusion of air has rendered mere determinations of dissolved oxygen worthless. With regard to the determination of organic carbon and nitrogen, we are inclined to think that Dr. Fox underrates the importance and overrates the difficulty of the method of Frankland and Armstrong. It is, with certain well-known restrictions, accurate as well as valuable when properly carried out. It was, however, wiser to exclude it from a manual intended for medical officers of health, who have seldom had the training of professional chemists.

The section dealing with air is about equal in length to that devoted to water. There is a great deal of valuable matter in it, particularly in regard to microscopic examination, which is constantly becoming more efficient, and therefore more important. There are some useful directions in regard to meteorology, and a chapter on ozone, in which, however, we find some serious defects. The simultaneous formation of ozone and peroxide of hydrogen is now well

known, and should have been noticed, and to say that "peroxide of hydrogen is produced by a combination of the oxygen of the air with water" is a very loose way of stating the facts.

In the last section, which treats of the sanitary examination of food, the best chapters are those which describe the inspection of meat, poultry, and fish. In this and in the simpler methods for food analyses, the author is at home; but he would have been wise, considering his limits of space, to have omitted the complete quantitative analysis of food, for which his directions are entirely insufficient, and in some cases misleading. On the whole, however, in spite of some defects, Dr. Fox's manual is a good sound piece of work, and will be of great value, not only to medical officers of health, but to all who are interested in sanitation—that is, to the whole medical profession.

Outlines of Quantitative Analysis. By A. HUMBOLT SEXTON, Professor of Chemistry in the College of Science and Arts, Glasgow. London: C. Griffin and Co. 1887.

THE writer of an elementary text-book is nearly sure to say in his preface that he thinks his work will supply a want. Too often he is alone in his belief; and we have of late years been flooded with such books or booklets, many of them absolutely unnecessary, and many worse than useless. Professor Sexton tells us the usual story, but in his case we are bound to admit that the story is perfectly true. A compact laboratory guide for beginners in quantitative chemical analysis was wanted, and the want has on the whole been well supplied. Even among students who do not intend to make chemistry a profession there are many who can afford the time and would gladly devote the labour necessary for the study of elementary quantitative analysis. Apart from its practical utility, the mental and mechanical training gained in exact scientific work is of infinitely higher value than the careless and slovenly test-tube messing which is so often mistaken for practical science. At some few schools, notably at Epsom College, elementary quantitative analysis has been introduced among the more advanced students with signal success. To those teachers and students who are willing to devote the time necessary for real scientific work in chemistry Professor Sexton's little book will be useful. It is not quite free from faults, but as far as we have seen it is accurate; the descriptions are clear and sufficiently full, and the examples chosen are for the most part well selected. The few faults which we have to find are of a secondary character. Now and then we regret the absence of some well-known simple and useful method—such, for example, as the estimation of copper by electrolytic deposition on platinum; but more frequently we are inclined to complain of the somewhat too wide scope which the author has permitted himself. Ultimate organic analysis, for example, including combustion in oxygen and Dumas' process for the estimation of nitrogen, cannot be sufficiently explained in so short a space, and no student would attempt it without fuller directions. Then the apparatus described is often more elaborate than is really necessary; and altogether the book, good and useful as it is, will be apt to frighten students who have neither much money nor much time at their disposal.

New Inventions.

POCKET SURGICAL INSTRUMENT CASE.

MESSRS. ARNOLD AND SONS, of West Smithfield, have made me a small pocket surgical instrument case, which will, I think, be found a boon to general practitioners. The average surgical dressing case is far too large and cumbersome to be habitually carried about in the pocket, consequently it frequently happens that it is not at hand when most wanted. A case is required containing a few of the necessary emergency instruments, yet so small that it may *habitually* be carried about without causing inconvenience by its bulk. The annexed woodcut depicts such a case, containing scissors, dressing forceps, artery forceps, probe and director, abscess knife, and gum lancet, with pockets for sutures and needles. The dimensions are as follows: length, 3 in., width, 2 in., thickness, ⅜ in. Pocket cases intended to answer this

purpose are sold by several makers, but the instruments being placed *in two rows* the case is rendered so thick as to entirely defeat the object for which it is made. In the above cases the few absolutely necessary instruments are laid as flat as possible *in one row*, and thus the outside thickness of ⅜ in. is obtained. The case fits easily into the watch or waistcoat pocket. WILLIAM D. STEEL, M.D.

BASDON'S CHLORIDE OF AMMONIUM INHALER.

THE catarrh-producing winter through which we are passing has given unusual interest to all devices for removing aural catarrh, of which the various inhalers for the use of chloride of ammonium are amongst the most valuable. We have tried the above inhaler, and can express our approval of it. It is well made and easily used. The materials of it are good; the cork of the bottle as well as the tubes and the stopper of the sponge tube are made of fine indiarubber. It has the great advantage of cheapness, is simple in construction, and works well; one feature of it being that a prolongation of the tube holding the pumice-stone, beyond the point of exit of the tube carrying the fumes into the water, serves to receive any excess of acid and thus prevent its escaping into the water. The directions should state the strength of the ammonia and acid preparations. The agents are Messrs. J. Carr and Co., Pharmaceutical Chemists, 171, High Holborn, London, W.C.

THE "UNBREAKABLE" CLINICAL THERMOMETER IN PATENT "SAFETY" CASE.

WE consider the patent "safety" case introduced by Messrs. J. C. Fell and Co. (1, Queen Victoria-street, London) a very useful invention. The insertion of the thermometer in its case must be performed by a screwing motion in the direction of the arrow marked on the case. If the attempt be made to insert the glass by direct pressure, considerable resistance will be offered by the indiarubber flanges, and it is difficult then to ascertain when the thermometer is "driven home." Would it not be an advantage to have some means of knowing how "far and no further" the instrument should be inserted?

IMMISCH'S IMPROVED CLINICAL THERMOMETER.

To Mr. Immisch's avitreous thermometer an addition has been made which will be appreciated by clinicians as a distinct improvement. It consists of the introduction of a stop, by means of which the reading can be fixed after the temperature is taken. This object is secured by simply pulling out a knob inside the bow, the reverse action serving again to liberate the pointer.

THE LANCET.

LONDON: SATURDAY, FEBRUARY 12, 1887.

DR. BUCHANAN has submitted a second official report to the Local Government Board as to the proceedings of his department during the year 1885. His first one related solely to cholera; the present one may be taken as his ordinary annual volume, and it deals with many matters of great interest. There is, however, one subject which may be regarded as taking precedence of all others, and that is the question of the influence of small-pox hospitals in London. Ever since the Medical Department of the Local Government Board found themselves confronted by the facts reported by Mr. POWER as to the influence of the Fulham Small-pox Hospital on the area around it, this subject has received a considerable amount of attention both on the part of experts and of the public. Former unbelievers in the influence for evil which the metropolitan small-pox hospitals have exerted have very generally come to see their error, and Mr. POWER'S contention of the mischief produced has been supported and endorsed by some of the ablest of metropolitan medical officers of health. Even those who do not agree as to the method by which the evil is brought about have been unable to deny the facts, but many have sought to reduce to a minimum the inference which it is natural to draw from Mr. POWER'S labours, and to point to side issues which, after all, do not materially affect the principal question under discussion. All the information at present available on the subject is now brought down to current date, and it is impossible to read the carefully considered document which Dr. BUCHANAN has submitted to his Board without being convinced that some radical change in the matter of isolating small-pox patients in urban districts is called for. London has always been liable to an excess of small-pox when compared with the provinces, but, as the report points out, "of recent years a new factor has come into operation." Indeed, it is shown, both by statistics and by diagrams, that, whereas in the provinces there has been a remarkable and almost steady diminution of small-pox mortality during the past ten years, no such reduction has taken place in the metropolis. It is true that improved vaccination in London has succeeded in effecting a great reduction in the small-pox deaths amongst children, but, notwithstanding this, the general small-pox rate remains so high that it is in effect sevenfold that which obtains in other parts of England. What is this new factor? None other than the establishment in London of permanent hospital centres for the aggregation of small-pox cases.

Quite recently a correspondence has been going on in the general press as to this matter, and an attempt has been made to show that even those who now condemn the London small-pox hospitals have expressed opinions to the effect that such hospitals operated for good in urban as well as in rural districts. But the principal opinion quoted was some twelve years old, and the writer who quotes it has apparently forgotten that the science of preventive medicine is progressive. The fact that Mr. POWER and others, who first ascertained the serious evils resulting from the Fulham Hospital, originally entered on their inquiries under a distinct conviction that the mischief complained of would admit of a totally different interpretation, gives special force to the altered views which they now find themselves compelled to express. These views were of such importance that they were investigated at great length by a Royal Commission, which came to the conclusion that by some means or other the London small-pox hospitals all shared the disastrous ability to spread small-pox over the neighbourhoods around them. Since then the investigation has been continued, and, instead of any discovery tending to vitiate this conclusion, the evil has become more and more evident, and it is clear that even the diminished number of acute cases which the Metropolitan Asylums Board decided to retain in London hospitals is capable of spreading small-pox, and this at a distance of a mile over inhabited urban areas. This circumstance is the more important because the mischief is maintained, notwithstanding every effort to control it. Improvements have been effected in the ambulance service, the staff of the hospitals have submitted to restrictions which were not deemed necessary before, and all the incomings and outgoings of the hospital have been placed under a rigid supervision. Indeed, those responsible for these hospitals could, in so far as administration is concerned, hardly have done more. But no effect has resulted; the hospitals, when used for small-pox, still remain centres of infection to the districts around.

We shall recur to this subject of the influence of small-pox hospitals in London when we review Dr. BUCHANAN'S report more in detail. But in the meantime we would note the curious fact that, at the request of the President of the Local Government Board, Dr. BUCHANAN has inserted in his report certain observations made by Dr. BRIDGES, of the Poor-law Department, on the same subject. Indeed, the insertion of Dr. BRIDGES' contribution is apparently intended to minimise the effect of that emanating from the Board's principal medical officer, but, as a matter of fact, it does nothing of the kind. It takes up two points. The first is, Do small-pox hospitals spread disease around them? As to this, Dr. BRIDGES accepts Mr. POWER'S facts, and admits that they "show clearly that a small-pox hospital in a populated neighbourhood has been, with all the precautions as yet devised, an appreciable source of danger to that neighbourhood." But he then proceeds, with the aid of the Registrar-General, to point out that a district which contains a small-pox hospital may possibly have the "benefit conferred upon it counterbalanced by some small disadvantage." As to this, we expect such districts as Hampstead and Fulham would far sooner have faced the "disadvantage" of having no small-pox hospital than have run the risk of such "benefit" as is here referred to. Dr. BRIDGES' next point relates to the question of the conveyance of the small-pox infection atmospherically for long distances. But this is on the present occasion entirely beside the mark, for Dr. BUCHANAN'S report does not deal with this subject at all. His contention is simply that, notwithstanding every effort to the contrary, these hospitals are in some way or other centres of infection, and that

their establishment has coincided in point of time with the maintenance in the metropolis of an excessive small-pox death-rate.

We sincerely trust that the atmospheric theory as set out by Mr. POWER may be found to be the true explanation of the evil, for it will then still be open to the Metropolitan Asylums Board to devise means such as were brought under the notice of the Royal Commission for so constructing small-pox hospitals that no infected air shall pass out of them. But if the anti-aerial theorists are correct, then we are in an utterly hopeless state, for "with all the precautions as yet devised"—and Dr. BRIDGES has apparently no others to suggest—the danger still continues. Surely the time has come when, as Dr. BUCHANAN points out, the other means recommended by the Royal Commission for reducing the chance of spreading this infection ought to be tried. The Asylums Board are wanting to spend large sums on small-pox hospital construction at the present moment; we hope that they will be urged to carry out the views of the Commission by the erection of at least one experimental hospital which shall destroy its own infected atmosphere on its own premises. When this has failed, but not until then, they will have done all that the public can at present expect of them.

IN our last number we pointed out that the optimist conclusions with regard to the past and future of the University of London set forth in the current number of the *Quarterly Review* required very considerable modifications when examined from the point of view of the other Faculties, and we shall now show that even from a medical standpoint the results are not so wholly favourable as the writer would have us believe. No one conversant with medical studies and medical examinations during the past ten or twenty years will endorse the following opinions of the writer of the article: "It is probably in Medicine that the influence of the University of London has been most powerfully felt, and that its most conspicuous successes have been achieved. . . . . It is generally admitted that the requirements of the University have done much to encourage those higher studies and researches on which the advancement of pathological and therapeutical science most depends." Criticism of such dogmatic assertions as these is difficult, as they are obviously written without due appreciation of the means and methods by which medical science has been making such rapid strides in late years. When the University of London instituted degrees in Medicine, and raised the standard of professional and general examination, all the ambitious *alumni* of the London and provincial schools naturally endeavoured to obtain the newly made and coveted degree of M.D. Lond., and this movement went on for some thirty years, because degrees elsewhere were only to be obtained by compliance with onerous restrictions as to residence which London students could ill afford to yield. The examinations and regulations of the University of London, although stringent, were then really much less severe than those which are insisted on at the present time, and the required period of study was not nearly so protracted or attended with such great expense. The Senate, being practically a body into which only the least possible change can be introduced, looks but little at other educational institutions, and clings to the belief that all modern improvements in medical education and examination are due to the example and influence of Burlington Gardens. But in the last twenty years a great alteration has come over the spirit of medical work and responsibility throughout the kingdom, whilst the authorities of the University of London have done little or nothing to assist therein, one guiding consideration alone influencing their conduct—that to increase the stringency of its examinations was the *raison d'être* of its existence and the proof of its utility. Other Universities have enormously developed from a teaching standpoint, and have increased the number of their students; biological and physical sciences have been fostered and encouraged by them; their degrees have acquired a greater prestige in the eyes of medical students, and candidates from all schools outside the metropolitan range have been attracted to Cambridge and Manchester, until now a very insignificant number of the total body of students are to be found amongst London medical graduates; and yet the University of London is satisfied. It does not see that under its present arrangements it is fast losing its pre-eminence. "The University has probably influenced the profession profoundly and beneficially by confining its distinctions to the *élite* of medical students, and by setting up a high ideal of professional qualification. It may be doubted whether an equally useful object would have been attained if it had admitted ten times the number on easier conditions." We very much question whether it is now attracting the *élite* of the profession, and we are quite sure that it could have been much more influential by not ignoring the teachers and without any real lowering of its standard. Out of 800 students in the London medical schools only 36 obtained the qualification of M.B. last year, and 42 is the average number for the past eight years. Is this a satisfactory result after fifty years of existence? We venture to say that the result is most unsatisfactory, and that many men equal in intellectual calibre, and in many respects superior in professional acquirements, to those who have obtained a London degree, have been stopped at the threshold by the undue severity of its first two examinations, whilst the prohibitive regulations of its later ones and the length of time and cost involved in carrying out the curriculum, have deterred many others. The Senate must not conclude that it collects within its net even all the abler London men; it is well known that for many years past this has not been the case, and our columns last week afford a striking example. One candidate only out of 11 who are competing for the vacant assistant-physiciancy at St. Bartholomew's Hospital is a graduate of the University of London. In 1863 the degree of M.S. was instituted, and we have, after twenty-three years, just 16 graduates who have passed the examination for its attainment. Most of these are also Fellows of the College of Surgeons, and have passed as stringent a professional examination for this honour as for the University degree. The institution of this degree in Surgery is therefore evidently not a success. Out of 14 examiners in medical subjects in the University itself, only one-half are graduates of the University, and of 12 external examiners appointed at the Victoria University only 3 are London

graduates, clearly showing that in medical science experts are largely found among graduates of other Universities. We believe that in a few years we shall see a further displacement of London graduates in the London teaching schools by those who, having been clinically educated in London, have sought degrees elsewhere. The *Quarterly* reviewer, whilst pointing out the desirability of a federation of the medical schools in London, says that this could not be enforced by any external authority, and could be adopted at once without waiting for a reorganised University to suggest it. This is undoubtedly quite true, but he overlooks the consideration of the assistance which an external authority like a University would be able to afford to such a movement, and we hope we may yet see a real University in London with a medical faculty under the care and guidance of the Royal Colleges of Physicians and Surgeons. The constitution of the Senate of the University of London, composed of "men of eminence in literature, in science, and in academic and public life," must be completely altered before it will pay any heed to the needs of teachers or students. It has quite lost touch with these, and its foremost considerations are given to shaping the "conditions of its examinations." For these only it exists, and to these its satisfaction is limited.

IT would seem to be possible, if not probable, that the session of Parliament now in progress will be distinguished by the passing of a Bill to consolidate and amend the Lunacy Acts. At present the Lord Chancellor's scheme has been embodied in two Bills, for the convenience of discussing the new proposals apart from the technical business of consolidating those provisions of the existing Acts concerning which there is no question. Hereafter the two Bills are to be combined; but meanwhile it must not be assumed that the Consolidating Bill contains no new and important amendments. For example, it makes the appointment of a resident medical officer essential in the case of every asylum having fifty patients. This enactment does not affect existing institutions, as the practice has outrun the law; but the substitution of fifty patients for one hundred as the limit is a notable amendment; and other changes not less significant, though more effective, will be found on close scrutiny. The Consolidating Bill will need to be carefully studied and watched.

The provisions embodied in the amending Bill are explained in a memorandum accompanying the measure as presented to the House of Lords, and are generally described as carrying out "in the main the recommendations made by the Report of the Select Committee on Lunacy Law in the year 1878," which committee, it will be remembered, the community owes to the persistent enterprise of the member for Swansea, Mr. DILLWYN. We are not able to say that the Bill as it stands is all that could be desired; but it certainly sets forth changes to be made in the law which will have the threefold effect (1) of rendering the treatment of sane persons as lunatics increasingly difficult and therefore less probable—it would be well if we could say impossible; (2) of protecting from vexatious proceedings those who have to assume responsibility in the placing of alleged lunatics under control, although in this respect the provision relates rather to the arrest of proceedings than to their prevention; and (3) of preventing the multiplication of private asylums, albeit those which exist are to be allowed to carry on their business, and any number which may be in process of establishment at the time of the passing of this Act are also to be tolerated. It is to be regretted that the rights of property, however admirable in their way, should be deemed an insuperable obstacle to the summary sweeping away of a system which is bad in principle, and admits of no defence. The change to be immediately accomplished consists mainly in the elaboration of measures whereby the now facile process of placing an alleged lunatic in confinement is to be complicated and brought under official cognisance. The main defects of the method by which this is to be done lie in details which can be modified in committee.

Speaking broadly, it may be said that the chief points gained by the reformers at whose instigation this passably liberal measure has been wrung from the Government is, that henceforth the hole-in-corner proceeding by which it is now easy to put away any weak-minded or eccentric person in an asylum as a lunatic will be, in a perfunctory and permissory fashion, brought under the cognisance of a County Court judge or a justice of the peace, who may, *if he see fit*, or if the victim of the proceeding has the wit and is able to get at the magistrate, bring about a personal interview between the alleged lunatic and the functionary appointed to protect him. What would be thought of a provision to the effect that if the judge thought fit, or a prisoner demanded it, the accused might be present at his own trial Nothing probably will convince those who look upon the victims of mental disease as wild beasts from whom the sane are to be protected at all costs and risks that even a reputed madman has his rights. After the passing of this Act, also, it will be possible for persons to be placed under treatment of their own volition. This is a most important and useful provision. Moreover, there will be a system of visiting and eporting upon the cases of persons who are confined as lunatics, which, if only what is now permissory can be made obligatory, and some way can be devised of compelling the authorities to discharge their duty quickly as well as efficiently, will be advantageous.

We are not greatly interested to discuss the details of the Bill at this stage—first, because they have been again and again discussed, *usque ad nauseam*, in both the professional and the lay press; and second, because unless or until the measure reaches the House of Commons it cannot be held to be actually on its trial as a practical proposal. There has been so much trifling with this question of Lunacy Law amendment, that even those who regard the proposal as a threat of "wolf" have ceased to tremble at the cry too often raised in vain; while for the majority—who earnestly desire the sweeping away of a vicious system—the truckling to vested interests, and the blighting influence of officialism interfering, with the effect of taking the heart out of every measure of reform and reducing what were once spirited proposals to mere puny changes of name and form, the vexatious delay and trifling which have characterised this matter throughout its progress have proved so disappointing as to give rise to a feeling of disgust with the whole business. Hereafter it may happen that interest may be re-

awakened by the development of a measure which at the first blush appears to be a curious crowding of elaborate detail into a crude and confined outline. Precisely that which might be expected to result from the meddling and muddling of many interested persons working together under the anxious supervision of a timid Minister, morbidly solicitous to please the majority and give serious offence to no one, this Bill certainly is. It is not possible that it should ever be a thoroughly satisfactory measure; but, on the principle that half a loaf is better than no bread, we may yet learn to take it and be thankful. Some of its provisions, if not ridiculous, are grotesque. Thus those who are wont to be thankful for the very smallest of mercies may find consolation in the proposed enactment by Subsection 2, Section 8, that a lunatic shall not be sent to an asylum upon the *medical* certificate of his mother-in-law; but it does seem strange that, as Lord HALSBURY manifestly contemplates the rapid rise and extensive practice of feminine physicians, he has not, while protecting a lunatic from his mother and mother-in-law, also provided for his safety against the machinations of his grandmother!

As we reported in our columns last week, Professor HAMILTON of Edinburgh has recently propounded his views on some points in the anatomy of the brain, which he has studied by means of enlarged sections of the organ prepared by a special method of his own. And first, with regard to the corpus callosum, he still adheres to the view which he put forward at the Royal Society of London in the year 1884. This theory is a modification of that originally advanced by FOVILLE. It argues that the fibres which compose the corpus callosum are really derived from the basal ganglia, and pass upwards towards the cerebral cortex along the fibres of the internal and external capsules to the opposite side of the brain. We think this notion is inherently improbable. Further, it is based on a method of examination which, to say the least, cannot be regarded as altogether satisfactory. The method is that of naked-eye examination, or aided by the use of a lens, of the enlarged and prepared sections. The more careful method adopted by Dr. BEEVOR and the experiments of Mr. VICTOR HORSLEY are apparently directly opposed to the conclusions of Dr. HAMILTON. In the October number of *Brain* for 1885, Dr. BEEVOR gives the results of his investigations of sections stained by WEIGERT'S method, so prepared as to exhibit the medullary fibres. This method demonstrated that the fibres of the corpus callosum and those of the internal capsule interweaved with one another in their passage to the cerebral cortex. He could not discover any direct communication between the fibres of the capsule and those of the corpus callosum. Mr. VICTOR HORSLEY, in the last series of the Brown Lectures, explained that when the whole motor area of the cerebral cortex of one side in the monkey was extirpated, stimulation of the remaining motor area was not able to evoke cortical epilepsy of the limbs of the same side of the body as the cortex stimulated, showing, with other experiments apparently conclusively, that the fibres of the corpus callosum conveyed stimuli to the opposite cortical motor centres. The same experimenter's observations on the division of the corpus callosum in animals pointed to a similar conclusion. As to Dr. HAMILTON'S plexiform nucleus having a correlating function situated internal to the upper part of the internal capsule near the lenticular nucleus, we can only say that it is altogether at variance with our present notions, for it would appear to be an axiom of cerebral physiology that a creating or a correlating function cannot take place in the absence of nerve cells; and, if our information be correct, Dr. HAMILTON assigns such a function to a mere aggregation of fine nerve fibrils. The optic thalamus is and has been a crux to experimental and clinical pathologists for all past time. We are much indebted to him for attempting to throw light on this most obscure subject. He believes that this body is a communicating centre of association bringing the functions of sight into relation with those of other cerebral functions. It may be so; but such a view rests on scarcely any other basis than that of mere opinion. We cannot but think that his theories as to the relation of nerve cells and fibres are also diametrically opposed to the doctrine of continuity of structure and function. We have only the report, necessarily brief, of the meeting of the Edinburgh Royal Society to guide us. But we cannot think he is right in doubting that nerve fibres enter nerve cells, unless in the motor areas. Must we suppose that Dr. HAMILTON believes that the capsular network of fibrils which surrounds the nerve cell, but does not come into actual structural relationship with it, acts after the fashion of induction of one current on another, as in faradisation? Although we are unable to concur with Dr. HAMILTON in all the conclusions at which he has arrived, we must allow that he has displayed considerable ingenuity in his views, and has contributed largely to our practical methods of investigating the anatomy of the brain.

WE have already pointed out that the Medical Council that is to sit on Tuesday next will be largely a new body. Fully a third of its members are either new or sit for the first time in new capacities. The profession at large will have its representatives, and several Universities which have hitherto had but half a representative, or one representative between two Universities, will each have a member of the Council all to itself to defend the individual interests of his own institution in that subtlest and most pleasing of all ways—by showing that the harmony and general welfare of the universe are only to be maintained by preserving intact all its emoluments and privileges. We cannot of course say what the exact nature of the duties of this reformed Council will be at its approaching sitting, but we may be sure that it will have some new duties to discharge, arising under the very imperfect Act of 1886, as well as various duties of the old type. The clauses of the Act which create fresh duties for the Council are chiefly two. Clause 2, Section 3, declares that it shall be the duty of the General Council to secure the maintenance of such a standard of proficiency at the qualifying examinations as shall guarantee the possession of the knowledge and skill requisite for the efficient practice of medicine, surgery, and midwifery. Not only so; it specifies a new and special means by which this duty of the Council is to be discharged:—

"For that purpose (securing the maintenance of such standard of proficiency as aforesaid) such number of Inspectors as may be determined by the General Council shall be

appointed by the General Council, and shall attend, as the General Council may direct, at all or any of the qualifying examinations held by any of the bodies."

In a subsequent paragraph, Section 3, the duties of these inspectors are defined. They are to report their opinions on the sufficiency or otherwise of examinations. Moreover, they are to report as to any other matters in relation to such examinations on which the General Council may require them to report. This is a large sentence, and may be used to make the reports of inspectors cover much. The bodies reported on are to receive copies of such reports, and so also is the Privy Council, which is further to be supplied with the answers of the said bodies. Clearly, then, the appointment of Inspectors under the recent Act is a most important—perhaps the most important—duty that can engage the attention of the Council. The duty of considering and reporting on this question in a preliminary way was entrusted to the Executive Committee, from which a report may be expected. It is of great moment that efficient men should be chosen for this duty of inspection. The words of the Act show that its framers look to inspection as the chief means of securing the general efficiency of examinations. And it is to be fondly hoped that no narrow fields or territorial restrictions will limit the purview of inspectors. We want, above all things, fair play and sound work in every division of the kingdom. We want a cessation of international suspicions and disparagements. We want the Corporations to respect the examinations of the Universities, and the Universities not to despise the examinations of the Corporations. The inspectors are expected to achieve these results, and they should be men to whom the profession and the examining authorities will look up.

Other new duties will arise under the second part of the Act, referring to the registration of *Foreign* and *Colonial* qualifications, and a report of the Executive Committee on the subject may also be expected. Further new work has been made by the recent Act not only for the Medical Council, but for all the examining authorities, in Clause 21 of Part III., which provides for the registration of diplomas in Sanitary Science. The examining bodies may all be expected to respond and to ask recognition of their examinations in Preventive Medicine. Besides these subjects, there will doubtless be a score of others to exercise the new Council and to tempt the eloquence of its members.

We bespeak, for the sake of our reporters and of our readers, speeches short and to the point. It is hard to hope that a Council of thirty or more will work better than one of twenty-four. The scheme of THE LANCET for a Council of twelve is still unrealised, as is the one-portal system of all medical reformers and even of the Council itself. Let us, however, whilst hoping against hope, give the Act of 1886 a fair trial.

ON the 3rd inst. Mr. Ritchie, in reply to a deputation from the National Society for the Prevention of River Pollution, stated that the Government intended to give to the County Boards, which they hoped to establish, the power of dealing with the question of river pollution, and it was hoped that this would meet the requirements of the case; at any rate, the Government would not be inclined to go any further until the County Boards Bill had been passed and its operation tested.

Annotations.

"Ne quid nimis."

THE PUBLIC HEALTH IN 1886.

FOLLOWING closely upon the Detailed Annual Report for 1885, the Registrar-General has just issued, in his quarterly return for the three months ending with December last, a summary of the national vital statistics for 1886. The birth-rate of England and Wales was last year equal to 32·4 per 1000 of the estimated population, and no less than 2·0 below the mean annual rate in the preceding ten years; it was lower than in any year since 1848, when the registration of births is known to have been very incomplete. The death-rate of the year, notwithstanding the exceptionally trying weather in the first quarter, and a more than average warm summer that caused excessive mortality from infantile diarrhœa, was so low as 19·3 per 1000, corresponding with the mean annual rate in the preceding five years. Thus the mean death-rate in the first six years of the current decennium (1881-90) was equal to 19·3, and was 2·1 below the mean-rate in the preceding ten years 1871-80. The Registrar-General points out that this remarkable decline in the death-rate "implies that more than 339,000 persons in England and Wales were alive at the end of the six years (1881-86) whose deaths would have been recorded had the mean rate of mortality equalled that which had prevailed throughout the preceding ten years." Nearly half this reduction in the death-rate in recent years was due to decreased zymotic mortality, for it appears that the death-rate from the principal zymotic diseases, which was equal to 4·15 and 3·40 per 1000 respectively in the two decennial periods 1861-70 and 1871-80, further fell to 2·43 in the six years 1881-6. Compared with those recorded in 1886, the deaths from diarrhœa last year showed a considerable increase, and those from "fever" were rather more numerous, whereas those referred to each of the other zymotic diseases showed a decline. The death-rate from scarlet fever was considerably lower in 1886 than in any previous year on record, and has fallen year by year since 1878. Fever (typhus, enteric, or simple) mortality has been equal to an annual rate of 0·26 per 1000 in the past six years, whereas the rates in the preceding three decennial periods were 0·91, 0·89, and 0·50 respectively. Only 284 fatal cases of small-pox were reported in England and Wales in 1886; the nearest approach to so low a number, recorded in any previous year since civil registration commenced, was 536 in 1879. On the whole, this brief summary of the vital statistics of 1886 supplies a measure of the public health during last year which is full of the strongest encouragement to sanitary effort, of which the present satisfactory bulletin is undoubtedly the result.

THE DARENTH HOSPITAL DISPUTE.

THE *Metropolitan*, in discussing a recent article in THE LANCET on the reasons for the opposition which has been raised to the construction of brick hospitals at Darenth, states, as one of these reasons, that medical knowledge increases with every epidemic, and with the help of advanced sanitation is reducing the virulence of small-pox. Certainly, as the value of vaccination and revaccination is better understood, it may be anticipated that small-pox will be less prevalent in the metropolis; but, apart from this, we fear that London will continue to be visited by epidemics, which will make the existence of a hospital at Darenth or elsewhere a necessity for very many years to come. We fail, indeed, to understand the position either of the Metropolitan Asylums Board or the Local Government Board in the course they have adopted as the result of the controversy. The

managers, in seeking to erect a permanent brick structure, were doubtless acting in accordance with the dictates of their experience of the great cost incurred in the maintenance of temporary erections. The Local Government Board, in their turn, had but too much reason for objecting to the construction of such a hospital on similar lines to those which have proved so disastrous to the metropolis. But the bargain which has been struck between the two authorities is distinctly ludicrous. The managers adhere to the use of brick, and the Board assent on the understanding that the hospital is not permanent; that is to say, the managers can now assert that the hospital is to be temporarily permanent, while the Board can plead that it is to be permanently temporary, or, in other words, they agree that the brick hospital is to be so badly built that it is warranted to fall into decay within a short period. It is clear that the speculative builder can urge that high authorities have justified his existence. The greatest hope for the reduction of small-pox in London is the present arrangement, which removes to a distance from occupied houses the majority of all persons suffering from this disease, and the aggregation of the few cases which must remain in London, under the conditions indicated by Dr. Buchanan in the report which the Local Government Board have just issued.

THE UNIVERSITY OF EDINBURGH.

THE prosperity of the University of Edinburgh continues and increases, especially in its Medical Faculty. Last year its matriculated students numbered 3635—110 more than the previous year. Of these, 1915 were in the Faculty of Medicine. In this faculty 51 candidates took the degree of M.D. and 229 the combined degrees of Bachelor of Medicine and Master in Surgery. This prosperity is attributed largely to the excellent appliances of the new University buildings. Private benefactions are always testifying to the gratitude and affection of wealthy or willing Scots, who are proud of their Universities, which have done so much for them and their countrymen. Several have been received in the last year; and one large donation is expected, to the amount of £50,000, from a public-spirited citizen of Edinburgh, which is to take the shape of a grand Academic Hall. The Fancy Fair in December, initiated by the students, proved a great success, and something like £11,000 were raised. When will London feel the true fire of this academic pride? When she does, with her superior resources and her splendid *clinique*, Edinburgh may begin to fear; but she must be in earnest, and have a real University that can win the admiration of all sorts of intellect and the gratitude of all classes.

PNEUMOTOMY IN PULMONARY ABSCESS.

DR. RUNEBERG, Professor of Medicine at Helsingfors, in a clinical lecture which has been published in a Swedish journal published in Finland, gives an account of a case of pulmonary abscess consequent on acute pneumonia, where he had performed pneumotomy with success. In addition to this he had collected notes of ten other cases. Leaving aside three of the eleven on account of uncertainty in the diagnosis, five of the remaining eight recovered, or at all events improved very decidedly, and in the rest, which were fatal, death could not in any way be attributed to the operation, so that Dr. Runeberg considers that when the diagnosis of pulmonary abscess is clear, and it is in an accessible situation, the best practice is certainly to open it. He then refers to the question of operating for gangrene of the lung. He himself had had a case of this, together with bronchitis and bronchiectasis; after the operation secondary gangrene and septicæmia occurred, which proved fatal. In seventeen other cases of gangrene he quotes from medical literature where pneumotomy was performed, seven recovered more or less completely, and the fatal termination of the remaining ten did not appear to have been attributable to the surgical interference. As to the method of opening the lung, Dr. Runeberg is in favour of resecting a rib, and then using the thermo-cautery. He does not approve of washing out the cavity with antiseptic lotions, thinking them dangerous, and believing that ample drainage is sufficient. In conclusion, he mentions several pneumotomy cases he had collected: two were for ecchinococcus, both terminating favourably; six were for bronchiectasic cavities with gangrene; and six for tubercular cavities. In the latter two classes of cases he does not think operative procedures are advisable.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

A SPECIAL conference between the Council of Hospital Sunday Fund and the managers of the various hospitals was held on the 9th inst. at the Mansion House, the Lord Mayor presiding. The following resolution was carried unanimously: "That with the view of largely increasing the Fund to be contributed on Hospital Sunday (June 19th) for the support of the hospitals and dispensaries of the metropolis, a series of public meetings be held during the two weeks preceding Hospital Sunday, and that the members of the committees of the several hospitals and dispensaries be requested to co-operate with the Mansion House Committee in organising these Jubilee Year meetings in their respective localities." The Lord Mayor will preside at a meeting arranged to be held in the Egyptian Hall, Guildhall, on behalf of the Metropolitan Hospital Sunday Fund, on June 14th, at 2.30. P.M. The meeting was originally fixed to take place on Wednesday, June 15th, but has been altered as above for the convenience of Lord Salisbury, who wishes to move the first resolution. It is expected that Lord Granville, Cardinal Manning, Canon Fleming, and many others will be present and take part in the proceedings. The London bankers and leading merchants will be specially invited to attend by the Lord Mayor. This meeting, taking place within five days of the Sunday (June 19th) on which the collection is made, should have a most favourable effect upon the amount received. We may here mention that Ernest A. Hankey, Esq., has recently contributed the sum of £495 to the Fund for this year.

DEATH BY FIRE ON RAILWAYS.

THERE can be no question as to the inexpediency of lighting railway carriages with swinging lamps burning petroleum. The risk is manifestly so great that it is inexplicable that a nation so advanced and enterprising as the American should tolerate it. The only hypothesis, which, indeed, is supported by other anomalies in the social life of that great nation, would seem to be that, however ingenious and go-a-head the Americans have shown themselves, they must be at heart a *young* people with the recklessness as to life which distinguishes the youth of communities, just as heedless daring is a characteristic of the young individual. Just outside the boundaries of strictly city life the American carries his revolver and uses it without scruple, as the juvenile employs his fists or a stick. So it is with the enterprise of this rapidly-growing people: everything must be very "big," and very "tall," and very "grand," and all risks, rational and irrational, must be dared in making it. We of England may be perverse and fatuous in the imbecility of our second childhood, but we are not quite such fools as to heat our railway carriages with swinging lamps of petroleum or by stoves. Our stupidity comes out in not heating them at all. It is quite useless trying to point the moral of the recent terrible catastrophe

which has caused a deplorable loss of life on the Vermont Central Railway. There is nothing to be said on the subject, except that it is not less a senseless than a deplorable occurrence. Death by fire on railways can but very rarely be classed as "accidental."

TUBERCULOSIS OF THE ŒSOPHAGUS.

AT a recent meeting of the Medical Society of Vienna (*Progrès Méd.*, 1887, No. 6, Vienna Correspondence), Dr. Zemann, assistant to Professor Kundrat, read a paper on tuberculosis of the œsophagus, of which he distinguished four different forms. In the first the affection is propagated by direct extension from the bronchial glands or the lungs. In these cases the gullet may be perforated by direct ulceration, and frequently the contiguous portion of the trachea or bronchus is subsequently perforated; or the ulceration of the œsophagus may arise from tubercular deposit in its anterior wall. In the second variety the mucous membrane of the œsophagus is invaded by extension of tubercular disease of the pharynx or larynx, producing superficial ulcers which are limited to the upper third. Instances were given of a still further propagation of the disease in the œsophagus in two patients who were suffering from strictures of the tube from corrosive poisoning. They were also the subjects of tubercular phthisis, and although the larynx and bronchial glands were free, yet caseous and yellow tubercles were found in the cicatricial tissue in the œsophagus. Bacilli were detected in these tubercles. The explanation evidently lies in the fact that ordinarily, from its thick epithelial lining, the œsophageal mucous membrane is protected from bacillary infection, and a protection which is destroyed by the action of corrosives. In both the cases, it should be added, intestinal tubercle was present. The third variety is acute miliary tuberculosis, of which, however, only one case is on record—viz., by Marotti. The fourth variety, also of great rarity, is infection of the œsophagus by sputum; a condition probably only produced when the epithelium is more or less detached.

THE NON-REGISTRATION OF STILLBORN INFANTS.

A CORRESPONDENT has sent us the "return" required by the Brooklyn Board of Health in the case of every stillborn infant born within the district. How complete this return is may be inferred from the fact that there are no fewer than sixteen items to be filled up. In addition to the more obvious ones of sex, parentage, place and date of birth, name and address of medical attendant, and cause of stillbirth, we observe that the "nativity of father and mother" is required, also the name and residence of the person making the return, those of the undertaker, and the place of burial. The importance of all these details, which, more or less modified, are required in almost every civilised country except Great Britain, will be appreciated by all who have had much obstetric practice or have interested themselves in forensic medicine. Obstetric practitioners know that while a certain proportion of stillbirths are inevitable from causes both known and unknown, a very large number are preventable, being caused by want of proper attendance before and after birth, syphilis in one or both parents, neglected or inefficiently treated, and other causes. The exact determination and classification of these would be sufficient to justify the notification, if not the registration, of all stillborn infants in this country. But there are other reasons equally strong from the medico-legal point of view. It is well known that most burial authorities adopt a sliding scale of charges for the burial of newly-born infants, the difference between those for a stillbirth and those for a deceased infant being from 1*s.* 6*d.* to 7*s.* 6*d.*—a great consideration to poor people, and a strong inducement to them to make false declarations. If this sliding scale could be abolished and one uniform charge made for all infants stillborn or deceased within twenty-four hours after birth, this inducement would be lessened, if not removed altogether. But, besides this, it is imperative that there should be a register kept and returns made periodically of all bodies interred as stillbirths in every public burial-ground. A printed form of certificate should be issued by the Home Office or the Local Government Board, which should be distributed to all medical practitioners, and these as they are presented at the burial should be carefully preserved. It is, to say the least, an anomaly that, while the birth and death of a premature infant born at the seventh month of utero-gestation are each registered as solemnly as the death of the "oldest inhabitant," the State takes no heed of the many infants born dead at full time.

THE LESSON OF THE "KAPUNDA" DISASTER.

AFTER the sad teaching of experience in the case of the *Kapunda*, we may perhaps expect that the safety of passengers on board ship will be more carefully provided for than it was in this instance. As usual, after an event of the kind, suggestions are numerous as to the best means of guarding against a sacrifice of life by such a disaster in the future. Boats, folding-boats, floating seats, life-belts and buoys have figured prominently in the newspaper correspondence on the subject during the last few days. There is no want of possible appliances apparently, and there are no doubt shipping companies willing to spend freely upon them in order to assure as far as may be the safety of their crews and passengers. Still the uncomfortable fact remains that such assurance cannot always be relied on, nor is it likely to be otherwise while the law upon this subject remains as at present—notably inefficient. It is not enough to entrust a matter so serious to the private judgment of individuals. The Board of Trade already exercises a jurisdiction in such cases, and it ought, in order to justify its action, to afford to every passenger, and not only to a limited number, the means of self-preservation in case of shipwreck.

THE DIPHTHERIA EPIDEMIC AT EALING.

THE outbreak of diphtheria at Ealing, to which we called attention in our last impression, has unfortunately proved more severely fatal than was at first hoped. We referred to three deaths which occurred in the first five days of the outbreak, but we now learn the fatality went on until the record has reached eleven. The attack was singularly sudden in its appearance, and seems to have been as sudden in its cessation. Its actual course has been apparently confined within the limited period of seven days, but, as Mr. Patten, the medical officer of health for the district, reported to his board, the fatal cases were in every instance confined exclusively to persons who were the first to exhibit symptoms of the disorder, and upon whom the virulence of the poison appears to have been expended. We are glad to learn that Mr. W. H. Power has received instructions to make an investigation into the circumstances connected with the outbreak of diphtheria at Ealing. There are certain characteristics of the outbreak which are etiologically of considerable interest, and a Government inspector has special facilities for extending his inquiry beyond any defined sanitary areas if he finds reason to suspect that the cause of a disease lies outside those limits. An unanswerable exposition of the cause of the catastrophe at Ealing may be of lasting value to the whole country, and for the matter of that to the whole world. It was a deliverance of an authority not less illustrious than Sir Isaac Newton himself that no more

causes of a phenomenon ought to be admitted than such as are true and sufficient to explain the phenomenon, and the problem in this case is how to get at the true and sufficient cause of the outbreak. Under present circumstances the cause cannot be very deeply concealed; whatever it may be, it is a cause which has operated chiefly among the well-to-do classes. It has been introduced suddenly; it has departed speedily. Taking the incubation period of diphtheria at three or four days, we may almost determine the day when the cause entered Ealing—namely, about Jan. 17th or 18th. If it had come in by water-supply, we must assume it would have affected large numbers of people irrespectively of class. If it had come in from drainage, it would most likely have affected the poorer classes rather than the richer. If it had been an atmospheric cause, it would surely have been equally distributed. If it had spread from one case to another simply by contagion or infection, it would have been traceable from one centre in definite lines. The evidence therefore points to the cause as entering through some particular article of food or drink, of which a limited number of susceptible persons partook within a very few days, perhaps hours, of each other.

SOME CHOLERA STATISTICS.

THE municipality of Marseilles has issued statistics concerning the second and last cholera epidemic which are not without interest. The number of deaths from cholera in 1884 amounted to 1781, or 4·94 per 1000 of the population. In 1885 the epidemic was not so severe; there were 1256 deaths, or 3·49 per 1000 inhabitants. During the course of the latter year the municipality organised twelve ambulances in different parts of the town, where assistance could be obtained at all times of the day and night. In this the authorities were supported by a staff of 102 doctors, 28 medical students, and 87 dispensing chemists. The total number of patients treated by the members of this service amounted to 2017, of whom 1513 were suffering from cholera. Of the remaining 504, the greater number were suffering from typhoid fever; then came, in order of frequency, cases of hæmorrhage, nervous complaints, pulmonary affections, wounds from accidents, and, above all, derangements of the digestive organs and a few cases of manifest drunkenness. Taking the cholera cases only, the males numbered 871 and the females 607. In 35 instances the sex was not indicated. This proportion is analogous to that noticed in 1884. The ages are given in all excepting 169 cases, and we find the division to be as follows: From the period of birth to the age of twenty there were 223 cases of cholera; from the ages of twenty to fifty there were 813 cases, and only 129 from fifty upwards; under the age of ten there were only 53 cases. It appears, therefore, that cholera proves most fatal in the prime of life. The nationality of 1438 patients was ascertained. There were 1081 French subjects, 272 Italians, and 85 persons belonging to various other nationalities. This shows a very great increase in the foreign elements, and helps to confirm the theory that the crowding together of the poor Italian labourers who flock to Marseilles is one of the most evident causes of insalubrity. During the epidemic of 1884, in the single district of the Bourse, out of 694 cholera patients no less than 242 were Italians. The statistics with regard to the professions of the sufferers unfortunately only refer to 798 patients. By far the greater proportion were unskilled dock labourers or navvies; these numbered 376. After this 94 cases are entered as without profession, 57 as domestic servants, 44 as charwomen, 28 sailors, 25 clerks or shop assistants, and smaller numbers as belonging to various other callings. From these statistics, though referring to only 798 out of the 1513 cases treated, it seems fairly demonstrated that those who came specially in contact with the cholera did not suffer conspicuously more than the rest of the population. But the men who were employed to bury the dead, to disinfect the houses, and to clean the sewers, and the whole of the medical and nursing staff, enjoyed remarkable immunity. It may be added, in conclusion, that the entire cost of the twelve ambulances and hospitals which supplied medical assistance to the 1513 cases amounted to £1641. For medicine and medical advice the actual outlay did not surpass the average sum of 12*s.* 6*d.* each case; but much gratuitous advice was given to the poor.

HOSPITAL SATURDAY AND THE CONTRIBUTIONS OF WORKING MEN.

WE have always felt, and candidly expressed a feeling of, regret at the inadequate collection for the hospitals of London made by its workmen on Hospital Saturday. With equal candour we have insisted that the only way to secure a fit contribution from workmen was to organise a weekly subscription. Something less than the price of a glass of beer would do it. An actual case in point is reported in the *Sunderland Daily Echo* of Jan. 24th, in a notice of the death of a local man of great worth, the late Mr. John Armstrong, of the firm of Armstrong, Addison, and Co., who is credited, amongst other good and sound work, with being the first to carry out the workmen's weekly subscriptions to the Sunderland Infirmary, which have become one of the chief sources of revenue. In the report for 1861 such subscriptions are mentioned as amounting to £45. In the following year they amounted to £200. In 1885-6 they had reached the creditable sum—in this town, whose whole population does not equal that of a large London parish, and in a time of great local distress—of £2000. All honour to such men as Mr. Armstrong, and to the working classes of Sunderland for following his lead and supporting the very best of their local institutions.

CASUAL WARDS.

THE condition of casual paupers requires serious attention, since it is possible that no more wretched set of creatures exist anywhere. Dragging out miserable existences during the day, at night they are housed in lonely dens hardly better than dog kennels, if fate keeps them in London; or if they take refuge in the country workhouse, in outhouses provided with a few sloping boards for beds. For food, a piece of bread and a basin of skilly serve for supper and breakfast. For this entertainment, however, the guest has to pay a somewhat high price, even calculated at the present low rate of wages, by having to perform a considerable amount of manual labour before he is allowed to proceed on his way and find work to support himself. Occasionally he finds that, having entered the casual ward with a light heart, he is not permitted to leave it, even supposing his daily task to have been performed, and he is constrained to remain, against his will, over the coming Sunday. Such an excess of hospitality is not, however, always well received; and the other day a "casual," much to the surprise of the workhouse authorities, refused to return to his "cell," preferring, as he said, the prison to the casual cells on Sunday. It appears that the prisoner had applied for admission on a Friday night at St. George's Workhouse, Westminster. On Saturday morning he was called out and set to work in the yard. The task given him he accomplished quietly and well, and expected the usual discharge. Instead of this, however, he was told to return at once to his cell, as no "casual" was allowed to be out on a Sunday, and as he had come in on Friday he must remain till Monday. In answer to an inquiry by the magistrate, the master informed him that according to the rules of the New Model Workhouse, the

"casual" is locked up and kept in solitary confinement all Sunday, without exercise, but with the option of attending a short mission service of an hour's duration. In this case the prisoner had not been informed of the rule when admitted, and refused to return to his cell when requested. In consequence he was removed to the police station, where he spent his Sunday, let us hope more cheerfully than in the workhouse cells, and was discharged by Mr. D'Eyncourt on the Monday morning. Comment on such a case is hardly needed. Nothing was said against the prisoner's character or conduct; he was simply an artisan out of work. Whilst in the workhouse he behaved properly, and the authorities admit he fulfilled his tasks "very quietly and well," and yet this man is arbitrarily seized and threatened with solitary confinement and imprisonment for twenty-four hours for no offence whatever except that he came to the workhouse on a Friday instead of any other night of the week. Severe measures no doubt are required to prevent imposition and idleness, but to act in this outrageous manner to every casual who seeks shelter for a night is certainly, to put it mildly, unnecessary.

THE COURSE OF THE POSTERIOR ROOTS OF THE SPINAL CORD.

DR. ANDREAS TAKÁCS gives the following summary of the results of his investigations in regard to the course of the posterior roots of the spinal nerves and the composition of the white matter in the posterior columns of the cord. 1. The fibres of the posterior roots on their entry into the spinal cord divide into two groups; one part penetrates the grey substance, whilst another group run externally and internally into the white substance bounding the grey horns. 2. The fibres which penetrate the grey horn appear to traverse the substantia gelatinosa, and may be followed to the ganglionic column of Clarke, in the cells of which they terminate. 3. The fibres of the posterior roots, which enter Burdach's column internally and the posterior part of the lateral column externally, immediately bend upwards and run at least as far as the third root above, where they penetrate the substance of the posterior horn. 4. Part of the fibres arising from the cells of Clarke's column dip into Burdach's column, and, after assuming here a wing-like aspect in section, go to form the column of Goll. 5. Another portion of the fibres arising from the cells of Clarke's column leaves the grey substance externally, and dips into the posterior segment of the lateral column, where, bending backwards and upwards, it arches round the lateral pyramidal column, and thus forms the lateral cerebellar columns. 6. Goll's column and the lateral cerebellar columns are composed of similar fibres, which represent a continuation of the posterior root-fibres, effected through the cells of the posterior grey cornua; these fibres run without any further connexion upwards in the spinal cord, and their number therefore progressively increases. 7. Burdach's column, as well as the posterior segment of the lateral column, are chiefly formed of the immediate prolongation of the fibres of the posterior roots, yet these fibres enter into the posterior horns at variable distances above their point of entry. The increase in size of these columns is effected also by the fibres proceeding from Clarke's column and passing through them to Goll's column on the one hand and to the cerebellar columns on the other, and Takács thinks that with these may be associated the fibres which connect the different parts of the column with each other. From these anatomical and histological facts he draws the conclusion that the column of Goll and the cerebellar columns are the continuation of the posterior root-fibres after these have been interrupted by the ganglion cells of the grey cornua. They constitute the most direct paths for the conduction of sensory impressions. The cuneate fasciculus of Burdach and the posterior part of the lateral column are chiefly transference-points, and are only mediately paths for sensory conduction. It thus becomes intelligible why in the primary stage of tabes and in the lower parts of the cord the fasciculi of Burdach are affected, whilst in the later stages and in the upper part of the cord the columns of Goll are affected. His pathological investigations show that the affection of the fibres of the posterior white columns in tabes stands in direct relation to the disease of the posterior grey cornua, and in these again essentially in relation to its changes in the cells of Clarke's column. The disease of the posterior segment of the lateral column and of the cerebellar columns is relatively less than that of the posterior white columns. He distinguishes lastly two forms of tabes.

EARLY CLOSING.

ACCORDING to the report which has just been issued by the Early Closing Association, the voluntary reduction of shop hours by various employers has been found to exercise a most beneficial effect on the character and abilities of shop assistants. Such an observation is in no way remarkable. It is impossible that work done over time can be of the best quality, or that its ultimate injurious effects can long be postponed. Trade also must suffer somewhat by the failure of energy in those who carry it on; and whatever may be said for securing custom by keeping late hours, we doubt very much whether, if a shorter working day were once inaugurated, its manifest advantages, alike for shopmen and the public, would not secure for it a wide and increasing popularity. Such an introduction has been effected by the Shop Hours Act of 1886. It is hoped that this valuable Act may be administered without any regular system of inspection. In that hope we certainly share, though not without some misgiving. In the circumstances, it is, at all events, satisfactory to learn that the majority of shopkeepers are in favour of the change which the Act is intended to bring about. They appreciate this measure in itself, but are unwilling to assume an individual responsibility in connexion with it unless assisted by a greater consensus of opinion on the subject among themselves than exists at present, and they look for more definite assurances of public support. We would recommend them not to depend quite so much upon prevailing habit. Popular custom in such matters is greatly guided by the methods of trade, and if these be determinately altered as provided by the Act we have little doubt that custom will follow suit Certainly an effort in this direction would now be well timed.

THE GORDON BOYS' HOME.

DIFFICULT as it may seem, the reclamation of the waste land of human nature by intelligent and moral culture has alway proved a success in careful hands. The history of the Gordon Boys' Home, we are pleased to note, affords no exception to this rule. Since its institution fifteen months ago, the affairs of the Home and its occupants have made material progress. The number of boys has increased from nine to eighty-seven; health has decidedly benefited by the influence of fresh air and wholesome food; schoolwork has been methodised and carried out in an efficient manner; while conduct, fair at first, has markedly improved, in spite of considerable difficulties, and without the exercise of any undue severity. The administration is conducted on the military system, and one former pupil has already taken service as a soldier. As is now generally known, however, the Home is not designed to act merely as a feeder for the army or navy; any of the ordinary trades are open to the boys, though it can hardly be doubted that the mode of their training will incline many to pursue a military life. We

note with satisfaction that some provision is made in the school arrangements for technical education. Smiths' and carpenters' work, tailoring, shoemaking, and telegraph work are taught with more or less success, and it is significant of the proficiency attained that all the boys' clothes, with the exception of caps and socks, are now made in the establishment. It need hardly be stated that out-door recreations are not forgotten, while two rooms have been fitted up within the Home for amusement during bad weather. There is a library of general literature, and music is represented by a pianette. Friends of the institution have been commendably forward with subscriptions and with gifts, and these we sincerely hope will suffer no decrease in the future. At the same time, it is at least doubtful if, in consideration of the antecedents, age, and undecided future career of most of the boys, such a present as a barrel of beer is a wise selection. It would be well, perhaps, if some rule were made excluding the use of stimulants from the Home except under medical restrictions. So far the memorial project has evidently succeeded. With due care it should yet attain its brightest expectations, and become, in a much greater degree than at present, a trainer in strong, intelligent, and moral manliness.

IS IODOFORM ANTISEPTIC?

THE widespread employment of iodoform as an antiseptic dressing may receive a check should the conclusions arrived at by MM. Heyn and Rovsing of Copenhagen be confirmed. These observers have (*Fortschritte der Medicin*, 1887, No. 2) been making experiments with iodoform to test its value as an antiseptic, which they point out is so generally accepted that the surgeon does not hesitate to employ a non-sterilised spatula or to insufflate ordinary air with the powder, procedures which he would shrink from employing were it not for the belief that the iodoform can destroy the germs adhering to the one or suspended in the other. Yet as iodoform is rarely used to the exclusion of other antiseptics (as carbolic acid or mercuric chloride), there is never much opportunity, clinically, of testing its germicidal properties. Mikulicz, in 1881, tested the action of iodoform upon putrefaction, but with no definite result; and Rummo's experiments in 1883 were complicated by his use of oil of turpentine as a solvent for the iodoform. Meyer found in one case of abscess that iodoform had no effect in reducing the virulence of the pus, and in another that it had a slight action. The results of the research pursued by MM. Heyn and Rovsing surprised themselves. Acting on the theory that it is through liberation of free iodine that iodoform enjoys its germicidal reputation, they prepared solutions of iodoform in olive oil and in serum, and, having sterilised them, mixed them with culture media, and studied the effect of cultures of various bacterial organisms in these mixtures, as well as under iodoform powder alone. They also experimented on rabbits by mixing inoculation fluids with iodoform. The details of the experiments need not be reproduced here; suffice it to say that in no case did the presence of the substance interfere with the development of micro-organisms. So that they conclude that as an antiseptic its employment in surgery is valueless. But, more than this, its use is dangerous, for, as two of their experiments proved, iodoform itself may contain pathogenic micro-organisms; and even if all care be taken to purify it, yet it may become the medium of the conveyance of pathogenic germs introduced into it through the spray or spatula. We trust that these experiments, which have received such prominence, will be repeated, for, if confirmed, we can imagine that the use of iodoform (apart from any other antiseptic) would in certain circumstances be serious. It would be deplorable if in any such case the material upon which the surgeon relies to protect his patient from bacterial invasion should prove to be the means whereby such invasion occurred. The writers of the article themselves advise that before using iodoform (which is valuable as a dressing on other grounds than as an antiseptic only), it should be disinfected in sublimate solution.

THE POWERS OF THE METROPOLITAN BOARD OF WORKS.

THE position occupied by the Metropolitan Board of Works has long been one of a very peculiar nature, and the services rendered to the population of London and its environs by that body have been also peculiar. As a matter of history it will hereafter probably be shown that the Metropolitan Board of Works has bridged over—so to say—the gulf between an obsolete (because exhausted) system of local government and the more perfect organisation by which it is to be replaced. Just now the Board is anxious for more power. It wants to take the public buildings of the metropolis under its protection, not only as regards their construction, but as regards their management. It would like to manage everything, and do all the licensing as well. These things could scarcely be done less efficiently than at present, so that we are not prepared to check the omnivorous propensity of the Board. By all means let Sir James M'Garel Hogg and his colleagues take over the entire business, and if there be something so soporific in the police officialism of the metropolis that a Chief Commissioner must needs forget to protect the streets in the neighbourhood of a mass meeting of roughs, as Sir Edmund Henderson forgot Pall Mall and Piccadilly, and as Sir Charles Warren has since, whilst otherwise taking admirable and most necessary precautions, forgotten Goswell-road, it may become desirable that the Board should add to its other cares that of the police control of the metropolis, vice the authorities of Scotland-yard, resigned.

A NEW METHOD OF SEWER VENTILATION.

A NEW proposal has just been brought forward for the ventilation of sewers. It has the merit of originality and ingenuity. Mr. R. S. Ash has patented a system of ventilation by the force of concussions resulting from explosions automatically produced. In the man-hole of a sewer, or in the ventilating-shaft of a coal-mine, &c., he places a small cylinder where coal gas accumulates till it reaches a little hole, and there comes in contact with a jet burning outside. An explosion results and the lid of the cylinder is blown off, but counter-weights make it fall back in its place, so that all is ready again for the next explosion. Of course the air is blown out of the man-hole, and a vacuum created and filled by the air rushing up from the sewer, but this displacement is not the principal merit of the process. A ventilating fan or revolving wheel and a furnace will equally produce a current of air; but such current generally travels down the central and main sewers, and leaves almost untouched the accumulations of foul gas in the branch sewers, in the angles, and in other inaccessible places. A shock, however, does not travel in a straight line, but spreads out in a circle. A stone thrown into a pool of water affords the readiest illustration of this fact. Let the edges of the pond be jagged and angular, the ripple will travel up every little crevice or opening in the banks. A current, on the other hand, even the current of a rapid stream, leaves quiet nooks made by the recesses of the embankment, where a boat may be safely moored without risk of its being borne away. Thus, an explosion in a sewer will with more certainty move the air in the branch sewers and out-of-the-way passages than will a strong current down the main channel. Also it should be noted that it is precisely these branch pipes and

sewers which are nearest to the inside of the dwelling, and therefore most urgently need ventilation. Consequently, if ventilation by concussion or explosion can be made to act without involving too great an inconvenience and expense, it is likely to prove as valuable a progress in practice as it is an advance in theory.

GASTRIC AFFECTIONS AMONGST SWEDISH PEASANTS.

DR. WIESENER mentions in the *Medicinisk Revue* that in part of Sweden gastric affections are very common. These he comprises under the general term "cardialgia." They include, however, chronic gastritis, dyspepsia, ulcer of the stomach, dilatation of the stomach, nervous cardialgia, and carcinoma. The first two of these are less common than the others. The main causes are to be found in overwork and injudicious diet—the usual lot of the poorer inhabitants. It is not that their food is actually insufficient, but it contains too little nitrogenous matter and too much carbo-hydrate, vegetable albumen taking the place of animal albumen, and quantity being substituted for quality, which impedes the mechanical and chemical processes of the stomach. Again, such meat and fish as the peasants do eat is usually salt, and their milk is sour; indeed, the fish is often in a partly decomposed condition, containing ptomaines. The porridge too, which in many places forms the staple of the peasant's dietary, is frequently insufficiently cooked, so that the starch is unchanged in the alimentary canal. These diseases are seldom met with until after the age at which young people take part in heavy out-door work. As to treatment, both of a prophylactic and curative character, Dr. Wiesener recommends more rest, attention to cleanliness (which is sadly wanting in the culinary operations), more fresh meat and vegetables, and an improved method of preserving milk &c. As to drugs, alkalies, hydrochloric acid, bismuth, magnesia, and carbolic acid may be found useful according to circumstances.

SUICIDES OF CHILDREN.

WE have no means of knowing whether suicides among children are proportionally more numerous within the last few years than they were previously. Attention has been specially directed to these most lamentable occurrences recently, and this may account for the fact that an increased number of cases are from time to time under notice. There is something especially distressing in the fact that consciousness may be, and often is, so painfully influenced by circumstances in the early stages of life that death is sought as a relief from misery. We do not think that a man or woman must needs be insane to seek death as an escape from trouble. It seems to us that well within the limits of sanity a perverse, or morally cowardly, or very much worried consciousness may reason out the proposition that life is not worth living, and conclude to die. Precisely the same processes which go on in the mind of an adult may be in operation in the mind of a child. There is, in short, no reason why the young should not commit suicide as well as the old, if only hope—which in a very practical way may be said to be an essential of life—is crushed out of existence. The mind in which hope dies may court death, and yet be in no sense *morbid*. It is difficult, but it is possible, to slay hope in the life of a child, and when this is accomplished it is not unreasonable to suppose that despair may end in self-slaughter. The intense haste of life and enterprise is doubtless one of the causes of suicide, and there can be no question that our system of forced education, and the premature imposition of hideous brain-tasks on the young, press heavily on the consciousness. We venture to think this subject of suicides among children is one which ought to be taken into very serious consideration by those who are responsible for the operation of laws which may ultimately render the population more erudite, but which will not, unless greatly modified, make them happier, or in a social sense more prosperous, than heretofore.

SUDDEN DEATH IN PLEURISY.

SOME years ago the occurrence of a series of cases where death suddenly took place during or after the operation of paracentesis thoracis led to much discussion, especially in the Paris Société Médicale des Hôpitaux, without, in many instances, clearing up the cause of the fatal event. Post-mortem examination often failed to reveal lesions, although the fatal attack was in most cases ushered in by convulsions. Of late we have heard less of such accidents; but the subject of sudden death in pleurisy is one which deserves study. Dr. Weill of Lyons contributes to the current number of the *Revue de Médecine* an essay concerning it, which hardly includes the class above alluded to where the seizure supervenes upon operative interference. He speaks rather of cases of pleural effusion that are unrelieved by art, and arrives at the following conclusions: That sudden death in pleurisy is allied to certain lesions—such as cardiac or pulmonary thrombosis or embolism, œdema of the opposite lung, and changes in the myocardium. Such derangements as grave syncope, mechanical impediment to the circulation from displacement of the heart and torsion of the great vessels, and hypothetical lesions, as multiple cerebral embolism, may be provisionally accepted, but require further investigation before being accepted as adequate explanations of the event. Sudden death may occur in various forms of pleurisy—in right pleurisies more often than in left, in acute or in chronic cases, and in cases of progressing, stationary, or absorbing effusion. The effusion is generally serous. The cases may or may not be accompanied by special symptoms, such as attacks of dyspnœa, syncope, and irregularity of pulse; but often death will occur quite unexpectedly without any premonition, and following upon some movement or effort on the patient's part. Paracentesis is the only prophylactic measure, and would be indicated by the onset of threatening symptoms, or evidence of heightened intra-pleural pressure.

PETITION OF THE BELGIAN MEDICAL FEDERATION.

THE Belgian Medical Federation, after a good deal of discussion, has agreed upon a petition, which it has addressed to the members of the legislative chambers on the subject of medical legislation. Discussing the question of examining bodies, the Federation expresses a distinct preference for the plan of a central jury, believing that it secures a fairer but more stringent and satisfactory examination than that of juries composed exclusively or mainly of the professors under whom the candidate has studied, and whose questions he can probably answer if he has merely a retentive memory. An opinion is also expressed that professors alone should not be allowed to form a jury, but that a certain number of practitioners should be associated with them. A State examination for all would, in the opinion of the Federation, exert an influence of the best kind on the instruction given in the four universities by setting up a noble emulation between them—"each of them labouring, not, as heretofore, to send into practice the greatest possible number of its alumni, with diplomas of questionable value, but to surpass its rivals by obtaining a greater amount of success at the State examinations." Of course, the Federation hopes that all foreign practitioners will, before being allowed to practise in Belgium, be obliged to go before the central jury, and, as the holders of Belgian University degrees will have to be examined, there cannot be any hardship in obliging the holders of foreign

degrees to undergo the same test. The Federation wishes dentists to be obliged to take medical diplomas. An important recommendation is contained in the portion of the petition upon "*le stage médical*." This *stage* is represented by the time of hospital clinical study, but according to the Federation it is much too short. No regulation insisting on a further time for clinical work appearing to be practicable at present, the Federation suggests that in view of the ever-increasing overcrowded state of the profession and the unwisdom of encouraging more young men without private means to enter it, it would be well to desist from offering scholarships to first-year's students and to employ the funds thus set at liberty in giving travelling exhibitions to those who have finished their course for the purpose of enabling them to prolong the *stage médical* with profit to themselves and their future patients. The Federation concludes by suggestions for a special education and diploma for experts in forensic medicine.

ARTIFICIALLY PRODUCED RELAPSE OF ERYSIPELAS.

DR. BORN of Cöthen contributes to the *Allgemeine Medicinische Central-Zeitung* an account of a case of erysipelas in an elderly woman, which was apparently brought on by eating some insufficiently cooked fish, which also disagreed with other people who partook of it. After the erysipelas (which had been extensive and accompanied by a good deal of fever) had disappeared, the patient remained in good health for six days, being only inconvenienced by the presence of a dried film of carbolic oil which had been used to anoint the affected surface. At the end of this time she received permission to wash herself, which she did pretty thoroughly with soap and flannel. The same evening her temperature rose again, and she suffered from rigors, heat, and headache, erysipelas reappearing the next morning, which arrived at its crisis on the tenth day and shortly afterwards disappeared. There seemed to be no doubt as to the connexion between the washing and the relapse. Dr. Born suggests that the infecting micrococci may have been lying dormant in the skin or subcutaneous tissue, the rubbing sending them into the circulation; or else that infective matter may have been external, and reintroduced by minute scratches or abrasions produced by the scrubbing. The public are, he says, known to have a great fear of washing in erysipelas, and this case would seem to show that there may be some ground for it. Dr. Born goes on to remark that medical men are told of individuals who have repeated and regular attacks of erysipelas more frequently than they see such cases for themselves, and he suggests that here it is more probable that dormant centres of infection exist in the body, which at times are brought into the circulation, and so rendered capable of causing an attack of the disease, than that the persons in whom these repeated attacks occur are again and again infected from outside.

AN EXPERIMENT ON HUMAN LIVES.

"IT behoves such populations as Ripon and York, which derive their drinking-water from a river seriously contaminated by agencies beyond their own control, to be aware that they are having an experiment performed upon their lives, an experiment contrary to the provisions of the English law." Such are the sufficiently striking terms in which Dr. Buchanan refers in the fifteenth Annual Report of the Local Government Board, which has just appeared, to the pollution by sewage of the river Ure. Strong as this language is, it is undeniably justified by the facts of the case. Briefly they are these: The Ure rises in the hilly country which lies upon the north-western border of the North Riding; it runs through Wensleydale, passing in its route through numerous villages and hamlets, and the little town of Masham. Winding on in a southerly direction, it eventually joins the Ouse, about fourteen miles above the city of York. All along its course it is used alternately as a sewer and a source of water-supply. At Masham, which lies about twenty-two miles from the source of the river, it receives the drainage of a town of 1000 inhabitants; and at Ripon, some fifteen miles further down, it supplies drinking-water to a population of nearly 8000, and receives drainage in exchange from the same town. Pursuing its course, it passes through several other villages which contribute still more sewage to the stream; and after joining the Ouse at Boroughbridge, a place situated some eight miles below Ripon, it flows on through the city of York. Mr. Sweeting, who made the inspection of the river, sums up the facts relating to York as follows: "The Ouse has, by the time it gets to York, received not only a considerable amount of impurity that has been brought into it by the Ure above Ripon and by the Swale, but also the drainage of the city of Ripon, of five small villages, and of Boroughbridge..... The sum total of contamination contributed by the Ure to the Ouse is therefore great." It is reassuring to learn that analysis seems to show that the Ouse water is not ordinarily affected to any serious extent by this abundant pollution, but it is certainly no unwarrantable use of language to describe it as an experiment upon human life.

THE ASYLUMS BOARD AND THEIR MEDICAL SUPERINTENDENTS.

A NEW discovery has been made of the extravagance and mismanagement of the Metropolitan Asylums Board. The City of London Board of Guardians have found the "painful fact" that at present there are no fewer than three medical superintendents in the employ of the Metropolitan Asylums Board for whom there is really no occupation whatever, and whose salaries range from £400 to £500 each, with rations and other privileges. The guardians can have no desire that medical knowledge shall increase, for they fail to see that the ratepayers would be distinctly benefited by the employment of medical men in investigations which would add to our means of treating disease successfully. It has been too much the custom of the managers at the close of every epidemic to dismiss a staff, some members of whom could render important service in the direction we have indicated; in times of epidemic pressure there is but little opportunity for work of this nature, but in the intervals it should be seriously undertaken, and it is a standing reproach that so little attempt has been made to turn to good account the material for study which is at the disposal of the medical officers of the managers.

ANTI-PYRETIC ACTION OF NITROGENISED AIR.

DR. FRANCISCO VALENZUELA of Madrid has made some observations (published in *El Siglo Médico*, Jan. 30th, 1887) on the effect of inhalations of nitrogen, or rather of air containing an abnormally large proportion of nitrogen, upon febrile diseases. He compared its action in reducing temperature with that of cold applications, quinine, antipyrin, digitalis, and arsenic, and concludes that the inhalation of nitrogen is the only method of treatment the cessation of which for a day is not followed by a rise of temperature to its former height. It has also, he believes, a beneficial effect on the diseased process itself. The plan adopted was to administer the nitrogen in two daily sittings of from half an hour to an hour in duration, beginning with air containing 17·76 per cent. of oxygen, and gradually decreasing this proportion till at the close of the sitting it was reduced to 12 per cent. Some few details are given of a

phthisical case in which it was tried. At first some dyspnœa was produced, but the evening temperature at once sank to normal, in addition to which the cough decreased, the blood almost entirely disappeared from the sputum, the sweats became less frequent, and the appetite improved. This patient had been previously treated by quinine, with but little good result. No other cases are reported, though several other patients were treated in this manner, most of whom are stated to have been benefited by it.

PHYSICIAN AND PHILANTHROPIST.

THE profession in Italy has been gratified by the royal recognition of a well-known "companion in arms." King Humbert, *proprio motu*, has made Commendatore of the Order of the Crown of Italy Dr. G. B. Trombini of Milan, in consideration of his judiciously applied and munificently sustained philanthropy. Charity unless wisely bestowed has long appeared to Dr. Trombini as worse than useless, and accordingly he makes himself personally cognisant of every case that appeals to him for help. But such help should be something more than mere almsgiving, and as he has his *protégés* under his eye, so he sees to their being usefully employed with a view to their self-rehabilitation. He has thus become the patron of an establishment at Melegnano, where 800 recipients of his bounty are kept usefully at work—an institution from which society is periodically reinforced by skilled and able hands who would otherwise have been lost to it. Furthermore, by the rule of *principiis obsta*, he has just established at Melegnano an infant asylum on a magnificent scale, where every physical and mental want of the waifs and strays of fortune will be judiciously met by a well-appointed organisation. This institution, suggested to Dr. Trombini in an hour of anguish after the loss of two sons on whom he doted, has already cost him 300,000 francs, and will form the most fitting and enduring monument of a citizen whom adversity has not soured, and who values wealth only as a means of raising and reinforcing his fellow-man.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

ON the 7th inst. there died at Berlin, at the early age of forty-nine, after a fortnight's illness with brain fever, brought on by overwork, Professor Carl Schröder, one of the best-known gynæcologists in Europe. His Hospital for Women at Berlin, with which his name will always remain associated, attracted crowds of students and patients from all parts of the world. Professor Schröder was a voluminous writer, some of his works—notably, his Manual of Midwifery, including the Pathology of Pregnancy and the Puerperal State"—having been translated into English. The following deaths are also announced:—M. le Dr. Snyers, one of the best known and most highly respected practitioners of Liège. Señor Dr. Don Francisco J. de Castroy Perez, Professor of Therapeutics in the University of Madrid.

THE TREATMENT OF FRACTURED PATELLA.

IN the report of the Sabbatsberg Hospital, Stockholm, recently issued, Dr. Söderberg has collected a number of cases of fracture of the olecranon and patella, in which a cutting operation has been performed—that is to say, where an incision has been made and the fractured surfaces (after being pared if necessary) sutured. A large proportion of the cases are from English sources, but there are some reported by American and continental and a few by Swedish surgeons. Altogether Dr. Söderberg has analysed 81 cases. A good result was obtained in 51; in 9 there was ankylosis, in 5 suppuration with impaired mobility. in 9 impaired mobility without suppuration, and in 3 fibrous union, while death occurred in 3. To separate the recent from the long-standing cases: Of the 43 recent cases a good result was obtained in 37, ankylosis occurring in 1, suppuration in 1, partial mobility in 3, and fibrous union in 1. The 38 cases of long-standing showed, as might be expected, a much worse series of results, there being only 14 which could be classed as good, while 3 were fatal and 8 ended in ankylosis. The author speaks with considerable reserve about the operation. In recent cases it is naturally less dangerous, but here it is, as a rule, quite unnecessary. In such cases of long-standing as present facilities for the operation, the statistics of the future may be expected to show better results than those of the past. Where, however, there is adhesion between the posterior surfaces of the fragments and the posterior walls of the capsule, as there was in a case occurring in the Sabbatsberg Hospital, of which the details are given, little or no good effect is usually produced by the operation. Dr. Söderberg seems to have missed a good many cases published by English and French surgeons—notably some forty collected by a French surgeon, details of which appeared in THE LANCET a few years ago. Altogether the cases published up to the present time must amount to more than 120, and there are besides several successful cases known to us which have not as yet appeared in print. It may be remarked, too, that in the cases published by Mr. G. R. Turner, and referred to by Dr. Söderberg, fibrous union was obtained rather more often than is stated by the latter writer.

THE COUNTESS OF DUFFERIN'S FUND.

WE are glad to learn that the Countess of Dufferin's Fund is being well supported and likely to prove a success. The statistics of India, though far from perfect, afford evidence of a very high rate of mortality among children under five years of age, and in the female population at the child-bearing age. It is to these two classes especially that the fund will prove beneficial by providing skilled medical assistance through the medium of qualified female doctors. The rules of caste and the customs of the country deprive them of the aid of the male members of the profession. There can be no doubt that by the introduction of educated female medical practitioners a great saving of life and reduction of suffering will be effected, especially in these two groups.

THE SIGNIFICANCE OF URIC ACID DEPOSITS IN URINE.

DR. JOHANNES MYGGE, while chief of Professor Trier's clinic in Copenhagen, having repeatedly remarked abundant and persistent deposits of uric acid coinciding or alternating with albuminuria, carried out a series of examinations on the urine of the 272 male patients under his supervision. Of 3287 urines examined, 2786 from 127 patients were entirely free from uric acid deposits, while they were found in 501 specimens from 105 patients, but only in any considerable quantity in 262 specimens from 59 patients. In 43 of these last patients the deposits were of a transitory character—that is, they were only observed once or twice; while in the remaining 16 they were found to persist for a week or more. Deposits both of a transient and of a permanent character were found, especially in rheumatic affections, whether of an acute or chronic form. Transient deposits were found also in pneumonia in 11 cases out of 25. In 27 out of the 59 patients in which uric acid deposits were observed albuminuria was also present in appreciable quantity, and in many of the rest there was a doubtful trace noted. Dr. Mygge's observations confirm Dr. Dickinson's statement that deposits of uric acid of a transitory character frequently coincide with the suppression of acute albuminuria. In the majority of cases where the deposit was

examined microscopically, casts or tubal epithelium cells were found, indicating that some connexion probably exists between uric acid deposits and functional renal disorder. In some instances, it may be supposed that a peculiar condition of urine, especially its supersaturation by uric acid or an increase in its acidity, has irritated the epithelium of the tubes, and has thus set up a renal lesion. In others, the latter condition doubtless precedes the precipitation of uric acid, and here Rabach's theory of the precipitation of uric acid being due to the existence of morphological elements in the urine may afford an explanation.

THE MOXON MEMORIAL.

A MEETING of the sub-committee appointed to determine the form of memorial best adapted to perpetuate the memory of the late Dr. Moxon was held at the Royal College of Physicians on Feb. 8th, and was very fully attended. Sir Joseph Lister proposed, and Sir Andrew Clark seconded, the following resolution, which was carried unanimously:—"That the fund raised by subscription be devoted to the foundation of a scholarship or medal, to be awarded by the Royal College of Physicians, and to the erection of a memorial of him at Guy's Hospital."

ALLEGED TOXIC EFFECTS OF COCAINE IN THE BLADDER.

IN the surgical section of the Madrid Medico-Chirurgical Academy, Dr. Call read a paper on the Effect of Cocaine on the Bladder. He found that fifty centigrammes of a 1 per cent. solution of the hydrochlorate injected into the bladder produce convulsive movements, upon which Dr. Osio remarked that this toxic action might very probably be due to the development of microbes in the solution.

"THE GRAPHIC AND GUY'S HOSPITAL."

THE issue of the *Graphic* for the 5th inst. contains a well-executed illustration of the Accident Ward of Guy's Hospital on Visiting Day, when the patients receive the members of their families from whom misfortune has separated them. The picture may, as we hope it will, enable those who are not personally acquainted with the inner life of the institution to understand a part at least of its usefulness, and stimulate the response to the appeal which has recently been issued on behalf of its funds.

THE HUNTERIAN ORATION.

THE President of the Royal College of Surgeons, Mr. W. Scovell Savory, F.R.S., will deliver the Hunterian Oration in the theatre of the College, on Monday, the 14th inst., at 3 P.M. precisely.

MEDICAL APPOINTMENTS IN INDIA.

DR. VANDYKE CARTER, we learn, has been appointed to be Principal of the Grant Medical College at Bombay, and Physician to the Jamsetjee Hospital there, in the room of Dr. Cook, F.R.C.P., retired. Mr. D. N. Parakh, M.R.C.S., L.R.C.P., has been appointed to be surgeon to the Goculdas Hospital in Bombay, in the room of Dr. Carter. Mr. J. B. Eaton, M.B., will, we believe, succeed Mr. Parakh as assistant-surgeon to the Sassoon Hospital in Poonah.

THE INTERNATIONAL MEDICAL CONGRESS.

WE understand that the owner of the steam yacht *Ceylon* is anxious to place his vessel at the disposal of members of the medical profession and their families who intend to visit America during the Congress. The cost per head (inclusive of everything) would be, we believe, £50, but at least sixty passengers would be required.

FOREIGN UNIVERSITY INTELLIGENCE.

Basle.—Dr. Bischoff, Professor of Midwifery and Gynæcology, has been obliged by ill-health to resign his post.

Brussels.—M. le Dr. Marique has been nominated chief of the post-mortem examination department. Some new courses have been recently opened on advanced toxicological chemistry, elementary biological chemistry, chemical and micrographical study of alimentary substances, and the detection of their alterations and adulterations.

Greifswald.—Dr. Grawitz, Extraordinary Professor of General Pathology and Pathological Anatomy has been appointed Ordinary Professor.

Leipzig.—Professors Olshausen of Halle, Zweifel of Erlangen, and Fritsch of Breslau, having been selected for the vacant chair of Midwifery, the offer was made to Professor Olshausen, whose name stood first on the list. He has, however, signified his intention of remaining at Halle. Dr. R. Altmann, Prosector of the Anatomical Institute, has been appointed Extraordinary Professor.

Leyden.—Dr. H. Treub has been nominated to the Professorship of Midwifery and Gynæcology, vacant by the death of Dr. S. Thomas.

Lyons.—For the chair of Experimental and Comparative Medicine, vacant by the death of M. Chauveau, M. Arloing has been selected by the Faculty of Medicine, the second name mentioned being that of M. Rodet.

Madrid.—The Minister of Education has just published a regulation applying to all Spanish faculties of medicine and pharmacy, obliging all students on their first matriculation to show that they have passed successfully through a year's course of instruction in French, but permitting the certificate of a similar amount of knowledge of German to be deferred till the end of the first year. This delay, however, will only be permitted for a short time, after which the original regulation insisting on both French and German certificates on matriculation will be enforced.

WE learn with great regret that Professor de Chaumont of Netley is seriously ill. Dr. de Chaumont is a singularly able and accomplished man, whose scientific work has secured him a deservedly great reputation, and we heartily trust to be able to announce next week his favourable progress towards recovery.

A COURSE of post-graduate lectures on Bright's Disease is now being delivered by Dr. Robert Saundby in the library of the Birmingham Medical Institute. The lectures commenced on the 9th inst., and will be continued on the next three Wednesdays, commencing each day at 4 P.M.

IN accordance with the resolution of the Epidemiological Society, the Council are about to consider the various Acts of Parliament having relation to sanitary administration, and propose in the first instance to consider the Public Health Act, 1875.

THE citizens of Nairn are about to perpetuate by a bronze statue the memory of the late Dr. John Grigor, in gratitude for his services as a medical practitioner, and for his munificence as a public benefactor.

AN outbreak of diphtheria, which has assumed formidable proportions, is reported as having occurred at Whitstable-on-Sea.

MRS. BANCROFT will give a recital on the 18th and 19th inst., at the Novelty Theatre, for the benefit of the Belgrave Hospital for Children.

THE HIGH ALTITUDE TREATMENT OF PHTHISIS.

(FROM A SPECIAL CORRESPONDENT.)

No. II.

Davos: the Indications and Contra-indications for and against the High Altitude Treatment of Phthisis: the recent Results of Treatment at Davos: Precautions regarding the Journey.

THE high altitude treatment is still sufficiently novel to leave considerable room for doubt regarding the classes of patients which can be confidently recommended to have recourse to the Alpine health-resorts. Nevertheless, every year now adds abundant data towards the formation of a correct conclusion on this important topic, and it is much to be desired that the profession should be made acquainted with the rich results of clinical experience now being gathered at Davos and elsewhere.

In approaching this question one preliminary error must be pointed out. Some writers fail entirely to distinguish between cases which do badly at Davos and those which do badly anywhere and everywhere. It adds nothing to our knowledge to inform us that cases of phthisis complicated with albuminuria do badly at Davos, for we know that such cases are beyond the reach of all climatic treatment. As little does it help towards a clear understanding of the special function of the Alpine sanatoria to say that cases of laryngeal phthisis fare badly there, as we may pertinently ask, Where do they fare otherwise than badly? On the other hand, it is of little value to inform us that the cases for Davos are those of chronic phthisis without hereditary predisposition, where there is immunity from visceral complications and the retention of digestive and circulatory vigour, because such cases as a rule respond fairly well to any climate where the meteorological conditions are more favourable to health than those amidst which the disease was contracted. We must come to closer quarters with the problem and avoid those generalities which are part of the general prognosis of phthisis. What we want to determine is this—In what classes of case may Davos be expected to prove decidedly more efficacious than Cannes, Madeira, Algiers, or Egypt? Secondly, What types of phthisis are likely to be injuriously affected by the peculiar features of the climate of high altitudes? Let us look first at the latter question, as admitting of a readier and more definite answer.

All authorities are agreed that patients with weak circulation should on no account be sent to the mountains. Circulatory weakness is the first and most conclusive contra-indication against the high altitude, and the reasons for this rule are too obvious to need amplification. Organic heart disease, such as valvulitis, is not an absolute contra-indication. The main point is the integrity of the cardiac muscle and the degree of efficiency with which the circulation is maintained. A patient with valvular disease, but in whom compensation is well maintained, may be freely recommended to try Davos; but, on the other hand, a case in which there is no actual cardiac disease, but marked functional weakness of the circulatory apparatus, should be prohibited from resorting to the mountains.

The next most important contra-indication is the presence of senile change. No doubt this point should be viewed in close conjunction with the former one, since arterial degeneration is probably the main reason why elderly patients fare ill among the Alps.

Gout and rheumatism are contra-indications which need only be mentioned in order that their importance may be appreciated. Organic nerve disease and hysteria are also prohibitive to the adoption of the mountain treatment, no doubt because of the highly stimulating properties of the climate of high altitudes.

Cases of phthisis in which dyspepsia is a prominent symptom cannot be sent to Davos without some misgivings, although the facts do not warrant the presence of dyspepsia being regarded as an absolute contra-indication. Almost every case of phthisis is sooner or later complicated with digestive troubles, but it is only where these are very obstinate that the high altitude treatment is definitely contra-indicated. It has been remarked that some patients with whom diarrhœa has been a troublesome symptom obtain speedy relief from this annoyance at Davos. It need hardly be said that no relief may be expected if there is any reason to suspect that the diarrhœa depends upon intestinal ulceration.

The last contra-indication to which we will draw attention is that peculiar condition known to German authorities as the *erethische constitution*, or the erethic diathesis. It is impossible to define exactly what is meant by this term, but every physician has a fairly definite conception of what is included under it. Probably the main feature in a constitution of this type is some species of nervous and circulatory instability. But whatever be the erethic constitution—and each observer must form his own conception of it—its presence is an absolute contra-indication to the adoption of the high altitude treatment.

Let us now look at the converse side of the question, and inquire to what classes of the malady the mountain treatment is specially applicable. In the first place, there can no longer be much doubt that in a considerable proportion of cases of early phthisis, where there is freedom from severe pyrexia, marked emaciation, and renal complication, the high altitude treatment is not merely palliative, but actually curative. The Davos doctors claim from 10 to 15 per cent. of cures, and anyone who visits the valley will find numerous individuals who arrived there with fully-developed phthisis, but who are now either restored to complete vigour, or, at least, are succeeding in keeping the destroyer indefinitely at bay. Some of these convalescents return to the lowlands and resume their avocations with safety, but many others find themselves compelled to settle permanently at Davos. It is a point worthy of the most careful study what proportion of the alleged recoveries are absolute cures, and what proportion are contingent upon the convalescent remaining in the climatic and hygienic conditions in which the cure was effected. The latter will undoubtedly be found to constitute a considerable percentage.

Cases of phthisis which exhibit a "torpid reaction" are those most suitable for the mountains. In other words, patients should not be sent to Davos unless they are capable of supporting and responding to the high stimulating climatic conditions which there prevail. This is a very obvious consideration, but, next to indications afforded by the circulation, it is the most important clue to the proper selection of cases.

Dr. Ruedi has remarked that cases of hæmorrhagic phthisis, where the hæmorrhages are profuse and the physical signs slight, are very favourable for treatment at Davos.

Apart from phthisis, there are many morbid conditions which respond readily to the high altitude treatment. Old pleurisies and unresolved pneumonias often undergo marvellously rapid improvement—a fact which is easily explicable when we remember that the aerial rarefaction promotes lung expansion, and the general climatic conditions stimulate nutrition and tissue changes.

Asthma often does well at Davos, but every practitioner is aware that no precise rules can be laid down regarding this erratic malady.

Cases of nervous exhaustion from excessive brain work often benefit decidedly by a resort to the high altitudes. In these patients the mountain air often acts as an excellent hypnotic, and with the return of sleep the other symptoms are rapidly relieved. It is, however, a *sine qud non* in such cases that the patient shall give up all intellectual effort and take absolute rest.

As a general rule, a certain amount of constitutional vigour is necessary to enable a patient to withstand the cold of the high altitude climate and to respond to its stimulating action. On this subject, however, any hard-and-fast rule would be fallacious, as undoubtedly some patients who arrive in a state of marked prostration subsequently rally and benefit by a residence at Davos. Nevertheless, there can be no more pernicious error than to suppose that the air of the higher Alps is any specific for advanced phthisis.

Do hopeless cases of phthisis pass the remnant of their days more easily at Davos than elsewhere? I can only answer—*cela dépend*. There is no rule. Some patients, who have tried all resorts, deliberately go to Davos in order to die as comfortably as possible, but probably a still larger number of moribund cases experience some relief on removal to the softer air of Mentone or Madeira. It seems natural that the dying should seek soothing and sedative climatic conditions rather than those that are pre-eminently stimulant.

An important question arises, whether invalids should go

direct to Davos or break the journey at some intermediate stations. Probably, if the circulation is vigorous and the nervous system fairly sound, a journey direct is the less of two evils; but if there is any reason to dread cardiac failure or severe nervous disturbance, the need for a halt at some intermediate points is imperative. The best places at which to break the journey are Ragatz and Klosters. Coire may be selected if the Landwasser route is chosen. The invalid should not stop either at Landquart or Küblis. Some German authorities urge that, whatever practice be adopted on the upward journey, there should be no exception to the rule of making the descent to the plains by several stages.

Patients begin to arrive at Davos early in October, and by the end of November the winter colony is assembled. It is one of the moot points when the patient should arrive. It used to be taught that it was a mistake to arrive before the valley was fully invested with its winter robe of snow—a rule which would delay arrival until the third or fourth week of November or later. The Davos doctors now teach that the earlier the patient arrives the better—September being a good month,—and that the more serious the case the greater is the need for a timely arrival. This seems reasonable, and English practitioners should note this point carefully, inasmuch as the neglect of it may lead to the disappointment of even well-founded hopes.

REPLANTATION, TRANSPLANTATION, AND IMPLANTATION OF TEETH.

REPLANTATION consists in the return of a tooth to the same cavity from which it has been extracted. Transplantation is the extraction of a tooth of one person and transferring it to the socket left in the mouth of another by the extraction of a tooth. Implantation is the ingrafting of a natural tooth into an artificial socket.

Replantation is performed when teeth have been knocked out, extracted accidentally or in error, sometimes to rectify malposition, and occasionally for disease. In the first three cases the tooth is simply cleansed in some antiseptic solution, forced into place, and kept fixed by means of ligatures. These cases do extremely well; even if the tooth has been out of the mouth some hours, union certainly takes place between the periosteum of the tooth and that of the socket; but whether the circulation in the pulp ever becomes re-established is not absolutely known. It has been inferred, because these teeth often lose none of their natural translucency, which is always the case when a pulp is dead; but there is no authenticated proof of this; it is therefore the practice of many to remove the pulp and fill the nerve canals before replacing. When there has been for a long time a chronic alveolar abscess, the offending tooth has been extracted; the diseased portion, which is invariably the apex, being cut off, it is put back into its socket, a hole being left through the fang to allow for drainage. This operation has not been very successful, and is almost entirely abandoned, at any rate in this country.

Transplantation is a very old operation. John Hunter, one hundred years ago, spoke of it as being in his time a habitual practice, and gave a very practical and detailed description of the procedure. When he was about to perform the operation he had half a dozen persons ready, so that if one "scion" tooth, as he called the one to be transplanted, did not fit the socket, another was at hand if required. He believed that the circulation in the pulp was restored, both from the translucency of the pulp and from the results of his oft-quoted experiment of transplanting a tooth into a cock's comb, which, by the way, he says in a foot-note, succeeded but once in a great number of trials. The objections are numerous: first, there is the difficulty in obtaining healthy fresh teeth which will fit the socket, the liability of the transmission of disease, the uncertainty of the result, and the comparatively short time the teeth last, three years being a good average. Notwithstanding, every decade the operation is reintroduced with some modifications in detail, only to fall into desuetude.

Quite recently, Dr. Younger of San Francisco brought before several dental societies, and published a monograph on, a method which he calls implantation. It is applicable to cases where teeth have been extracted and the alveolar crypt filled up with cancellous bone. An artificial socket is made with a trephine or large drills; a dead tooth, no matter how old so long as its periosteum remains intact, rendered aseptic and its pulp canal filled, is then inserted into the socket and ligatured in places. It is maintained that the great difference of this operation is that the tooth is placed in a healthy, not a diseased, socket. In his early attempts he used fresh teeth, which he obtained from other dentists, and which he endeavoured to keep alive by implanting them in cocks' combs, so that one had visions of a farmyard of cocks armed with teeth as well as spurs; but he soon abandoned this, presumably because he failed. He has performed fifty operations since June, 1885, two of which were failures. There is unimpeachable evidence that a large number of these teeth have retained their positions, but the question is how long will they continue to do so. We certainly should not expect this to be any more successful than transplantation with fresh teeth, and those that are not thrown off at once either by absolute failure to unite, or subsequently from alveolar abscess, will in time, as past experience has shown, become absorbed just as ivory pegs are in bone.

COCAINE IN DENTISTRY.

MR. MORTON SMALE, at the last meeting of the Odontological Society, made a communication on the use of Cocaine. He advocated the formation of a subcommittee of investigation to experiment with the drug in order that an authoritative utterance might go forth to the members of the Society and the profession at large as to its value; for at present, with regard to dentistry, the profession and the public are in a state of suspended judgment in relation to it. He said: "I began using cocaine early in 1884, and have used it more or less ever since. In the Westminster Hospital Report for 1885, I thus speak of it: 'In extraction, if the drug is applied to the gums surrounding the tooth (the part having been first dried and protected from saliva, or the cocaine will be washed away) the pain attending the adjustment of the forceps is obviated, but the wrench attending the fracture of the alveolus and rupture of vessels and nerve at the apical foramen is much the same. A small loose stump may be removed painlessly. In cases of fractured teeth, where it is necessary to remove the pulp, cocaine is useful. Applied to the surface of the exposed pulp it will deaden sensibility, and if applied several times at short intervals the nerve extractor can be inserted and the pulp extracted with very little pain. This drug is of distinct value in practice, and should be in every dentist's consulting-room.' The experience of injecting it into the gum tissues has caused me to enlarge very materially my views about it. I have been using 5, 10, 15, 20, and 25 per cent. solutions of hydrochlorate of cocaine; the weaker ones I have discarded in favour of the four stronger ones. Of the cocaine faintness I have seen and heard very little, except in the journals; the only case was in a man who felt faint at the insertion of the needle, and who, when he was vaccinated a year or two before, nearly fainted. I can hardly quote cases in a short casual communication, but I have used it successfully for the following purposes: extractions, torsion, removal of live pulp, inserting hickory wedge between teeth for stopping purposes. These operations, all very painful ones, have been done almost without pain, so much so that they were easily endurable. In cases of removal of pulp, I have, in addition to injection, always applied the drug to the surface of the pulp. A few days since I applied it both by injection and to the cavity in a patient who had some exquisitely sensitive cavities on the buccal surface of some molars and premolars, but the result did not come up to my anticipation. The patient said the pain was lessened, but it was still painful. I was anxious to be able to speak from personal experience, and, as I could not afford to lose a tooth, thought I would try the next most painful operation in dentistry. This, I consider, is the rapid separation of two front teeth. I therefore inserted five minims of a 20 per cent. solution into my gum over my front teeth, and placed a wedge of hickory wood between them, and drove it in with a dentist's hand-mallet, at the same time driving the wedge against the gum between the teeth. I left the wedge there for twenty

minutes, and then slowly dragged it down between the teeth. The whole of this was done with very little discomfort, and had I a tooth that wanted removing I should be content to have it removed after the injection of cocaine."

THE SHAW-STREET HOSPITAL FOR WOMEN, LIVERPOOL.

THE annual meeting of the governors and supporters of the Hospital for Women, Liverpool, was held on the 3rd inst., the attendance of subscribers being very large. Mr. T. A. Bushby presided, and after a few preliminary remarks, in which he referred to the inquiry into the practice of the institution which has taken place since the last annual meeting, called upon the secretary, Mr. M. Guthrie, to read the report of the past twelve months' work. From this it appeared that, in spite of the disturbed state of affairs which has recently prevailed in the hospital, its general usefulness has been proved. The number of in-patients was 239 and of dispensary patients 3505. The expenditure during the year was £1759, being £47 less than in the previous year; but as there was in 1885 a deficiency of £88, the total expenditure came to £1847. Against this there was received the sum of £1074, showing a deficiency of upwards of £770. The medical board, in their fourth annual report, announce a decrease in the work done in the hospital and dispensary in the past year as against 1885, the number of in-patients showing a decrease of 108 and the out-patients a decrease of 6. To this report tables were appended which showed that of the 239 in-patients 104 were submitted to operation. Of this number 64 were minor operations, with no mortality; the remainder were major operations or abdominal sections, and resulted in a mortality of 10. This report and the balance-sheet were then adopted, and votes of thanks to the various visitors to, and officials of, the hospital proposed and carried. The appointment of the honorary medical staff was then proceeded with, and Dr. Briggs was, upon the motion of Mr. Tinne, unanimously reappointed.

Mr. LANCASTER proposed the re-election of Dr. Burton, who, he stated, had been connected with the hospital ever since its foundation; his practice as a surgeon had never been called into question; he had maintained a moderate course; he had invariably consulted according to the rules of the hospital; and he had not in a single instance brought upon himself the condemnation or the criticism of the members of the medical profession in Liverpool and elsewhere who had thought fit to criticise the operations of the other members of the medical staff.

Mr. BIRKETT seconded the proposition.

Mr. TINNE opposed Dr. Burton's re-election. He had no objection to Dr. Burton as an individual, but he considered that it would be for the interests of the hospital that the whole of the old staff should not be re-elected at that meeting.

Mr. S. S. BACON opposed, and Mr. W. OULTON supported, the proposition, and ultimately, after a few remarks from the chairman respecting the reasons which had led to the proposal of names separately, and not, as in former years, *en bloc*, a vote was taken, and Dr. Burton was declared re-elected by thirteen votes to nine.

Mr. C. JONES moved that Dr. Imlach be re-appointed as honorary medical officer of the institution. After having briefly reviewed Dr. Imlach's connexion with the charity from its foundation down to the close of the inquiry which was held last year, Mr. Jones contended that, on the strength of the report of the investigation committee, they could not dismiss Dr. Imlach—a contention which he supported by several quotations from the report. He hoped that they would not permit the great injustice of turning away one man who had done so much for the success of the hospital.

Mr. W. B. HALHED seconded the motion, and contended that in the special report of the Medical Institute there was no implication that Dr. Imlach should be turned out of the hospital. If they had wished that course adopted, he was sure that they would have said so.

Mr. GUTHRIE having opposed the motion, Mr. LANCASTER defended the Inquiry Committee, and maintained that in its deliberations no hostility was shown to Dr. Imlach or to any member of the medical staff of the hospital.

The voting then took place, when sixteen hands were held up in favour of the reappointment of Dr. Imlach and seventeen against.

Mr. C. JONES demanded a poll on account of the proxies. This was granted, and resulted in the rejection of Dr. Imlach by 272 votes to 137.

Some formal business was then transacted, and an adjournment of the meeting for the consideration of several alterations in the rules was carried. Previously, however, to the termination of the proceedings the Rev. D. MOUNTFIELD proposed a vote of thanks to Dr. Imlach, who had, he considered, been very badly treated. Mrs. ALFRED BOOTH also spoke in favour of Dr. Imlach, but the proposal was not put to the meeting.

ARMY MEDICAL SCHOOL, NETLEY.

THE fifty-third session of the Army Medical School at Netley was brought to a close on the 7th inst., when General Sir Donald M. Stewart, Bart., G.C.B., G.C.S.I., &c., late Commander-in-Chief of the Forces in India, presented the prizes gained during the term by the surgeons on probation. Sir Donald, in some remarks to the students, criticised the system at present in force in the British service, which in his opinion has one main defect—viz., the absence of any direct connexion between the medical service and regiments.

Sir JOSEPH FAYRER then announced the gift of about 350 separate works, comprising between 600 and 700 volumes, to the library at Netley School, by Dr. Waring, late of the Madras Medical Service. The collection, he stated, was specially rich in works on Materia Medica, and others dealing with foreign countries, besides several rare books of medical bibliography.

Sir THOMAS CRAWFORD thanked Sir Donald Stewart for having consented to present the prizes, and congratulated the students who had gained their commissions on the way in which they had worked through the past session, concluding by most heartily wishing them every success in the future.

Sir THOMAS LONGMORE expressed similar good wishes for the prosperity of the medical officers on behalf of the professors under whom they had studied, and the proceedings then terminated.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

West Sussex Combination.—Dr. Charles Kelly's report for 1885 reached us somewhat late. Of the eleven districts which compose it, the lowest rate of mortality was in the small district of West Worthing, where it stood at 7·3 per 1000, the highest being 16·6 in the Westbourne rural district These rates have, however, varied much during a series of years. Viewing the whole combined districts the death-rate has diminished from a mean rate of 15·4 per 1000 in the five years 1876-80, to 14·4 in the subsequent period of five years. There has been a rise in the diphtheria death-rate in this district. Taking the whole of England that rate stands at 121 per 1,000,000; in West Sussex it now reaches 170 per 1,000,000, and it is, as elsewhere, more inclined to be fatal in rural and semi-rural places than in towns. Thus, in Brighton the rate is 81 per 1,000,000, whereas in Petworth it is more than five times, and in Horsham more than three times, higher. But there are differences even in the same district, and Dr. Kelly has made it a special care to examine the influence of soil as regards this and other mortalities. The result is that he has found that the death-rate per 1,000,000 from diphtheria, being 246 on his entire area for a period of ten years, was no less than 454 on the retentive soils such as the Weald clay, the clayey beds of the lower green sand, and the gault; and only 127 on such pervious soils as the upper and lower green sands, the chalk, and the lower Tunbridge Wells sands. The influence of soil in the production of this mortality is the more striking because it appears so entirely to outweigh that which is brought about by personal inter-

communication, which, one would have imagined, would in towns have so greatly exceeded that which obtains in rural areas. These and similar contributions to our knowledge of the etiology of disease come most appropriately from medical officers of health acting for wide areas, and they add special interest to their reports.

Huddersfield.—Dr. Spottiswoode Cameron in his report on the fourth quarter of 1886 points out that although, speaking generally, Huddersfield compares well as regards infectious diseases with the twenty-eight large towns and cities quoted by the Registrar-General, yet the rate of mortality in the borough from diphtheria has been half as much again as in the towns referred to, and that the rate from whooping-cough was three times that with which it is compared. Diphtheria is essentially a disease to be dealt with by early isolation of first attacks, and though some cases are received into the Birkby hospital, yet this sanitary institution is, notwithstanding excellent additions to it, not sufficiently complete to deal with this disease. Whooping-cough is, unfortunately, a disease which is at present almost beyond the scope of sanitary measures.

Salford.—Dr. Tatham, in reporting for the last quarter of 1886, finds it necessary to issue a warning as to the spread of scarlet fever in his district; this spread being largely due to deplorable carelessness. Of 603 cases reported to the Health Department during the quarter, 307, or 51 per cent., were removed to the infectious hospital. This is very satisfactory, but unless those responsible for the remaining 49 per cent. take note of the warning issued, especially as regards children during the school age, scarlet fever will continue to spread. The numbers of those attacked during the past four quarters have been 177, 230, 550, and 603 respectively. It is certainly time for the inhabitants to aid the health officers in controlling this scourge.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5846 births and 3470 deaths were registered during the week ending Feb. 5th. The annual death-rate in these towns, which had declined in the preceding four weeks from 26·5 to 21·1 per 1000, further fell last week to 19·6. During the first five weeks of the current quarter the death-rate in these towns averaged 22·8 per 1000, and was 1·9 below the mean rate in the corresponding periods of the ten years 1877-86. The lowest rates in these towns last week were 13·5 in Nottingham, 13·7 in Brighton, 16·3 in Norwich, and 17·1 in Birkenhead. The rates in the other towns ranged upwards to 25·0 in Preston, 25·3 in Bradford, 26·3 in Manchester, and 28·4 in Plymouth. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 485, 392, and 371 in the preceding three weeks, further declined last week to 367; they included 111 from whooping-cough, 104 from measles, 54 from scarlet fever, 40 from "fever" (principally enteric), 29 from diphtheria, 27 from diarrhœa, and 2 from small-pox. These principal zymotic diseases caused the lowest death-rates last week in Nottingham, Cardiff, and Wolverhampton; and the highest rates in Bristol, Plymouth, and Blackburn. The greatest mortality from whooping-cough occurred in Bradford, Sunderland, and Plymouth; from measles in Bristol and Newcastle-upon-Tyne; from scarlet fever in Salford, Sheffield, Blackburn, and Birkenhead; and from "fever" in Plymouth. The 29 deaths from diphtheria in the twenty-eight towns included 16 in London, 3 in Portsmouth, 3 in Liverpool, and 2 in Preston. Small-pox caused 1 death in Manchester and 1 in Blackburn, but not one in London and its outer ring, or in any of the twenty-five other large provincial towns. Only 1 small-pox patient was under treatment on Saturday last in the metropolitan hospitals receiving cases of this disease. The deaths referred to diseases of the respiratory organs in London, which had declined in the preceding four weeks from 731 to 432, further declined last week to 364, and were 279 below the corrected average. The causes of 75, or 2·2 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Manchester, Nottingham, Leicester, and in six other smaller towns. The largest proportions of uncertified deaths were registered in Halifax, Oldham, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 23·7 and 24·7 per 1000 in the preceding two weeks, declined to 19·8 in the week ending Feb. 5th; this rate exceeded by 0·2 the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 12·2 and 14·6 in Leith and Perth, to 21·3 in Aberdeen and 23·7 in Glasgow. The 495 deaths in the eight towns last week showed a decline of no fewer than 121 from the numbers in the previous week, and included 23 which were referred to whooping-cough, 12 to measles, 10 to "fever" (typhus, enteric, or simple), 8 to scarlet fever, 7 to diphtheria, 6 to diarrhœa, and not one to small-pox; in all 66 deaths resulted from these principal zymotic diseases, against 65 and 75 in the preceding two weeks. These 66 deaths were equal to an annual rate of 2·6 per 1000, which exceeded by 0·5 the mean rate from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had declined in the preceding five weeks from 27 to 19, rose again last week to 23, of which 17 occurred in Glasgow, 3 in Edinburgh, and 2 in Paisley. The 12 deaths from measles showed a decline of 6 from the number in the previous week, and included 9 in Glasgow and 2 in Aberdeen. The deaths referred to "fever," which had been 5 and 6 in the preceding two weeks, further rose last week to 10, of which 5 occurred in Glasgow, 2 in Edinburgh, and 2 in Greenock. The 8 fatal cases of scarlet fever, on the other hand, showed a considerable further decline from recent weekly numbers, and included 4 in Edinburgh and 3 in Glasgow. The 7 deaths from diphtheria, of which 4 occurred in Glasgow, corresponded with the number in the previous week. The 6 deaths attributed to diarrhœa, showed a decline of 4 from the number in the previous week. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had steadily declined in the first four weeks of the year from 213 to 155, further fell last week to 126, and were 9 below the number returned in the corresponding week of last year. The causes of 76, or more than 15 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 36·2, 32·2, and 28·2 per 1000 in the preceding three weeks, rose again to 29·7 in the week ending Feb. 5th. During the first five weeks of the current quarter the death-rate in the city averaged 31·5; the mean rate during the same period being but 21·8 in London and 21·4 in Edinburgh. The 201 deaths in Dublin last week showed an increase of 10 upon the number returned in the previous week, and included 4 which were referred to scarlet fever, 3 to whooping-cough, 3 to diarrhœa, 2 to "fever" (typhus, enteric, or simple), 1 to diphtheria, and not one either to small-pox or measles. Thus the deaths from these principal zymotic diseases, which had been 21, 13, and 14 in the preceding three weeks, were last week 13; they were equal to an annual rate of 1·9 per 1000, the rates from the same diseases being 1·8 in London and 2·0 in Edinburgh. The fatal cases of scarlet fever, whooping-cough, and "fever" showed a decline from the numbers in the previous week, while those attributed to diarrhœa were more numerous. The deaths of infants exceeded the number returned in any previous week of this year, while those of elderly persons showed a further decline. Seven inquest cases and 8 deaths from violence were registered; and 54, or more than a quarter, of the deaths occurred in public institutions. The causes of 32, or nearly 16 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

Surgeon-General E. G. M'Dowell, of the Army Medical Staff, has been appointed Principal Medical Officer at Halifax, Nova Scotia.

Messrs. Wilkins, Patterson, Venour, North, and Dr. Ogilvie (all Surgeons-Major) have been appointed Senior Medical Officers to Brigades in Upper Burmah.

Mr. C. W. Owen, C.I.E., M.R.C.S., L.R.C.P., who was with the Afghan Boundary Commission, was recently presented by the Amir with an autograph letter thanking him for

the good work which he had done in the medical treatment of Afghan officials and other subjects of the Amir.

ADMIRALTY.—The following appointments have been made:—Surgeon James J. Walsh, to the *Vernon*, additional; Mr. John V. Laverick, to be Surgeon and Agent at Skinningrove, Staitho, Runswick, Kettleness, and Hammersen.

RIFLE VOLUNTEERS.—2nd Volunteer Battalion, the Loyal North Lancashire Regiment: Surgeon and Honorary Surgeon Major R. Settle, M.D., resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the battalion on his retirement.

VOLUNTEER MEDICAL STAFF CORPS.—The Woolwich Division: William Collingridge, M.D., to be Surgeon (Supernumerary).

Correspondence.

"Audi alteram partem."

GENERAL HOSPITALS AND PARISH INFIRMARIES.

To the Editors of THE LANCET.

SIRS,—I agree entirely with the letter of your correspondent "X.," published last week, but I would go much further than he. It has always seemed to me, more particularly so in these days of hospitals partially closed for want of funds, that it is an injustice to the ratepayer to have built, and to compel him to keep up, the magnificent parish infirmaries which one may see now in the north, south, and west of London. It would surely have been no difficult matter in the case of many parishes to have subsidised the nearest general hospital, and thus to have commanded beds sufficient, at any rate, for all urgent cases of disease. And if it be objected that none of the existing hospitals could have provided sufficient accommodation, I should reply that it would have been better far to extend the already existing general hospitals, and, if need be, to build others in quarters where they were needed, than that each parish should have launched out into bricks and mortar to the extent that has been done with completely equipped establishments. It used to be the custom at Guy's, I know, to receive parish cases at so much per week, but few such are, I think, admitted now; and I am told, that in some of the large continental towns a small sum per diem is paid for each patient admitted, unless he be selected and consent to occupy a bed in the wards devoted to special clinical cases. It is difficult to see what insuperable difficulty there could have been, or would be now, with an ever-growing population, in adopting some general plan of this kind. But I venture to maintain that these large parish infirmaries are not only an injustice to the ratepayers—I do not think I should take up a pen on that score; they also do harm to the general hospitals; and, in a sense, I think it may be fairly said that they may do injustice to the patients that are admitted within their own doors. I have been told by more than one surgeon at the metropolitan hospitals that a great number of surgical cases are now diverted by the parish infirmaries. It is evident that it must be so. First-class men seek and obtain the resident appointments at these institutions, and they are not content—why should they be?—to treat only the very chronic and incurable cases; they operate on hernias, amputate limbs and breasts—in fact, do anything within the range of trodden or untrodden medicine or surgery; and as a result the practice in general hospitals is curtailed, the students suffer to a very definite extent, and again, since it is a very clinching argument, the rates are necessarily increased. Surgical skill and appliances, the latest novelty in drugs, cannot be had for nothing; and the advanced medicine and surgery (particularly the latter) of the present day are admittedly very expensive. I submit that the ratepayers are not called upon to undertake this expense until the general hospitals are unable to meet the demand, and it is safe to assume that in the present impecunious state of these, and with their many vacant beds, it could be done cheaper and more helpfully by them than the parishes can do it in their own infirmaries, when the cost of building, staff, &c., is taken into account. It may also be said that to turn the parish infirmary into a general hospital, as is done in the present day, is unjust to many of the patients.

This might seem at first a delicate matter to touch upon, but it is no more than common sense after all. Everyone will probably allow that the advanced surgery of the present day—I speak as a physician might be expected to speak!—should always, in the interest of the patient, be a matter of free consultation. Success is happily often the crown of what at the outset is but a desperate venture to the patient, and even to the surgeon hardly more than a forlorn hope, with forlorn writ very small and hope unusually big. But it is the desperate venture that requires the more consideration, and the fastest express requires the most perfect possible of brakes. Again, it is quite impossible in the present day that the one or two (able men as they are) resident medical men can work a large general hospital—such as, in fact, these institutions are becoming,—and this has of late been recognised in the proposition which has been made, that they should have a consulting staff attached to them. But I do not think that this meets the requirement. Honorary consulting physicians and surgeons are for the most part illusions, and to my mind a largely increased acting staff is what is necessary. By this means alone can any free consultation, the discussion of opinions and of proposed measures of treatment in critical cases, be guaranteed as a matter of routine. I live in hope that somehow or other, at some not far distant day, the present parish infirmaries may be linked each to its nearest general hospital, and that both will be in some measure aided by the rates. I feel sure that economy and efficiency would gain thereby, and that thus the real want of hospitals and infirmaries would be mutually supplied.

I am Sirs, yours obediently,

Weymouth-street, W., Feb. 5th, 1887. JAMES F. GOODHART.

THE CAMBRIDGE CHOLERA FUNGUS.

To the Editors of THE LANCET.

SIRS,—In a recent issue (Jan. 20th) of your contemporary *Nature*, Mr. Gardiner, who had previously suggested that the so-called Cambridge cholera fungus might be a Chytridium, has withdrawn that opinion, and now believes it to be the involution form of some bacterium. He further adds that this organism very vividly recalls to his mind the involution form assumed by Bacterium cyanogenum. I should like at once to point out that this later opinion bears out to a certain extent the conclusion which I arrived at last year. This I have expressed in the new edition of my Manual of Bacteriology, which will be issued, I hope, in a few days, as follows:—"At a meeting of the Physiological Society, May 15th, 1886, at Cambridge, a preliminary communication was made upon the investigations in Spain, referred to in the first edition of this work. The observations made by Roy, Brown, and Sherrington, rather tend in the opinion of the author, to confirm Koch's views. Comma bacilli were found to be present in some cases in enormous numbers, and the frequency of their occurrence led these observers to believe that they must bear some relation to the disease. At the same time, as they failed to find them in all cases, they regarded the existence of a causal relation as not proven. They failed to find the Naples bacterium or the small straight bacillus noted by Klein, but they drew attention to certain peculiar mycelium-like threads in the mucous membrane of the intestines. This organism, however, judging from a preparation stained with methylene blue, which was exhibited at the meeting, appeared to the author to much more closely resemble some of the involution forms of the comma bacillus, *filaments à masses globuleuses*, figured by Van Ermengen than anything else he had seen. Yet, assuming that these peculiar structures do belong, as described, to some species of Chytridiaceæ, it is very doubtful whether they can be considered to be of any significance. Methylene blue has been employed by Koch and others, including the author, for staining sections of the intestine from cholera cases, and had these structures been constantly present it is hardly possible that such striking objects could have been overlooked. Again, we must bear in mind that hyphomycetous fungi occasionally have been found to occur saprophytically in the intestinal canal, the lungs, the external auditory meatus, and elsewhere. We must, however, wait before expressing a more decided opinion until the report of these observers is published in full."

I have now before me the proceedings of the Royal

Society (No. 247), an abstract of which was given in your issue of Jan. 29th, and I must confess that I am much puzzled by the illustrations which accompany the preliminary report on this subject. These figures, as Dr. Klein has pointed out, certainly appear to represent a branched mycelium, but they do not in the least recall to my mind the actual preparation which I had an opportunity of examining, and upon which I founded my opinion in May last. It has occurred to me that possibly Mr. Gardiner was shown the very same preparation, and hence his recent opinion that this organism is some involution form.

With regard to methylene blue having been used by Koch, I would refer those interested in this discussion to "Bacteriology," p. 141, where the method is given, as reported in the *Berliner Klinische Woch*, No. 31 (Conferenz zur Erörterung der Cholerafrage, Juli 26, 1884). In their preliminary report, Messrs. Roy, Brown, and Sherrington state that the particular method they employed was almost identical with that of Löffler, and they add, "So far as we know, Löffler's method has not been employed to stain sections of tissues taken from fatal cholera cases," but here I must add that Löffler's method was precisely the one which I used in staining a great number of sections in July, 1885, as it had been especially recommended for that purpose by Dr. Workman in the *British Medical Journal*, No. 1280.

I am Sirs, yours faithfully,

EDGAR M. CROOKSHANK, M.B.

Manchester-square, W., Feb. 3rd, 1887.

THE FUTURE UNIVERSITY OF LONDON.

To the Editors of THE LANCET.

SIRS,—In your excellent article replying to the writer in the *Quarterly Review*, you enumerate University College, King's College, the Science and Art Schools at Kensington, the Technical Institute of the City Guilds, the Royal Colleges of Physicians and Surgeons, and the Inns of Court as bodies which are not, but might be, incorporated in a true University of London. Will you allow me to ask for a reconsideration of this position? It is of immense importance that the wrong ingredients should not be mixed to form the new University. As nearly as circumstances will allow, we want *one* body of professors actually united and organised as a single corporation of teaching examiners or examining teachers to constitute the new University. The attempt which has been made by Sir George Young and one or two members of an Association which has never itself assented to such a scheme—to bring individuals from diverse and very many teaching institutions together as the basis of a new University—is, I venture to assert, a fatal error. A certain small amount of popular support may be obtained for the new University movement by thus widely throwing the net, but it is at the sacrifice of all that is worth obtaining in the foundation of a new University. The Normal School of Science has no *locus standi* in the matter. Its business is to train school teachers and to grant its own certificates. Its lecturers are paid by the taxpayers. The Technical College similarly must stand on its own bottom and grant its own diplomas, and has no claim whatever to take part in the University. Leaving aside for the moment the question of professional degrees in law and medicine, it results that for the general purposes of University training and the granting of degrees in Arts and in Science there are only two bodies in London which can claim the concession to their professors of the special favour and privilege in question. These two bodies are University and King's Colleges. The mere fact that there are *only* two such bodies is immensely important; it results in an absolute certainty that were these two bodies endowed by the Crown with the style and authority of a university, they would gradually fuse with one another and become a single corporation identical with the University. Thus we should at last see in London one powerful and authoritative body of teachers able to claim and to attract endowments whilst teaching and carrying on research on a scale worthy of the richest city in the world. The professional degrees in Law and in Medicine must, I admit, be placed on a somewhat different footing: and in the new University the Faculty of Law and the Faculty of Medicine should consist not of the professors of these subjects in the University and King's College, but of representatives of the professions of law and of medicine generally. This distinction is necessary for several reasons, but chiefly because in the case of medicine the degree has a special professional significance, and because the teaching of medicine and surgery, strictly so called, is splendidly provided for by the great London hospitals and tested by the great medical corporations. There may be a reluctance on the part of the Crown to grant the power of conferring what would purport to be an academical degree to a purely professional corporation. If so, the objection might be removed by making the new body—whatever its internal constitution may be—which is to confer the degree of M.D. on London students occupy the position of the Medical Faculty of the new University whose Faculties of Arts and of Science are formed by the professors of University and King's Colleges. It will be objected to these proposals that special privilege and favour are to be accorded to University and King's Colleges. But why should such favour not be granted to them? The essence of university foundations is the grant of a privilege of dignity and authority to a selected body. No one can maintain for a moment that University and King's Colleges are not worthy to receive this privilege, or that there is any other body in London which has any claim, except in regard to medicine and law, strictly so called, to share it.—I am, Sirs, your obedient servant,

E. RAY LANKESTER, M.A., LL.D., F.R.S.

Savile Club, Piccadilly, W., Feb. 7th, 1887.

*** We did not instance these institutions as constituent bodies in a new university, but merely to show that the existing University had done nothing to bring them into any closer union than was the case with corresponding institutions in the time of Stowe.—ED. L.

ON THE CAUSE OF MARKED HYPERTROPHY OF THE ANTERIOR WALL OF THE BLADDER.

To the Editors of THE LANCET.

SIRS,—At the meeting of the Pathological Society on the 18th ult., Mr. Fenwick drew attention for the first time to the fact that the anterior wall of the bladder hypertrophies much more than the remainder, especially in cases of unrelieved stricture of the urethra. The position of the bladder in the anterior part of the pelvis enables it, when dilated, to expand posteriorly in the direction of the rectum and upwards into the abdominal cavity, but the pubic wall flattens the anterior surface. This affords the true explanation of the phenomenon. If membranes in the shape of spheres of varying sizes enclose fluid, so that the tension is uniformly distributed along each fibre, the thickness of the membrane must by the principles of hydrostatics be exactly proportional to the radius of the corresponding sphere. Similarly it follows that the greater the flattening of the anterior wall of the bladder as compared with the curvature of the posterior and upper walls, the greater must be its thickness, in order that the pressure of the urine in the bladder may be balanced by the same tension of each muscular fibre. Hence the diminished curvature of the anterior wall of the bladder throws a proportionate increase of work on that part of the wall, and a greater thickening ensues. This is, in fact, an illustration of the general law in physics—that every limitation to the free movement of a body throws an increased strain upon the body: the pubic wall impedes the projection of the bladder forwards, and therefore throws an increased strain upon its impeded portion, the anterior wall, and this completely explains the localised thickening to which Mr. Fenwick has drawn attention.

I am, Sirs, yours truly,

Jan. 19th, 1887. G. N. PITT.

THE LAW RELATING TO CORONERS.

To the Editors of THE LANCET.

SIRS,—As I have made a public promise, of which you have been kind enough to take notice, that I should bring in a Bill to amend the law relating to the election of coroners in English counties, I wish, if you can give me space in your valuable columns, to explain why I have not

been able to fulfil that promise. I did draw up such a Bill, in which I proposed that the freeholders on the Parliamentary Register for the time being should be the electors. On consultation with several of my Radical M.P. friends, with whom I generally act, I find there is an objection on their part to conferring any special benefits on the freeholders, and they prefer that the whole of the voters on the Parliamentary Register should be the electors. This I find impossible, as the numbers which would have to be dealt with would be so large as to be practically unworkable. Another objection taken is that the freehold portion of the present Parliamentary Register will within a few years be done away with, on the principle of "one man one vote," and that it would not be likely to be kept on for the election of coroners only. It is also objected that the election of coroners for counties should be put in the same category as that for towns, which is vested in the town councils, and should in the former case be delegated to the county local boards, which are likely to be established during the present session of Parliament. Failing the support of the gentlemen with whom I usually act, I have given up the subject in despair, and written to one of the Middlesex magistrates for the information of the Bench, stating these reasons for not bringing in the promised Bill. I have always been of opinion that every coroner should be in the first place a medical man, and that an examination in the law of evidence, similar to that in State medicine, should be set on foot, in order that every medical man who aspires to be a coroner should be able to show by passing it that he is doubly and fully qualified to discharge the duties of such a responsible post. Your powerful advocacy of such a proposition would soon bring it within the range of practical politics, and confer a great boon on the medical profession. Barristers or solicitors who hold a double medical qualification would in this case also be eligible for the post.

I am, Sirs, yours truly,

Millwall, Feb. 8th, 1887. R. MACDONALD, M.D., M.P.

LISTERIAN AND NON-LISTERIAN OVARIOTOMY.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of May 27th, 1882, there appeared an editorial note on the results of ovariotomy at the Samaritan Free Hospital in the year 1881, contrasting the results under the Listerian and non-Listerian methods of operating, and I shall be obliged by your allowing me to recall attention to the subject. In the note referred to you pointed out that the mortality under the Listerian method was very much less than that under the non-Listerian in my hands, but, unlike your contemporaries, you were careful not to draw any conclusions from the data. In the following number (June 3rd) you were good enough to publish a note of mine, in which I asked you to suspend your judgment, on the ground that it was "a very unsafe proceeding to lay too much stress on any particular series of cases, and especially on those of one year only." The reasonableness of that request will be apparent when I bring to your notice the results of the same operation during the year just past (1886), for they completely upset the fanciful conclusions derived from the results of 1881. Thus, in the year 1886 there were forty-six ovariotomies performed in the Samaritan Free Hospital by three operators, with a careful observance of all the details of the Listerian method, and of those cases seven died; while the twenty-five cases done by me without any so-called antiseptic precautions, beyond the strictest attention to cleanliness, *all recovered*.

I offer no comment, and have only to request that you will give the same prominence to this statement as you gave to that to which I here recall your attention. As the results of the work done in the Samaritan Free Hospital will not be published in the form in which they appeared in 1882, and as there will be no means of judging between the merits of the two systems in future reports, I beg to enclose the precise data for your own use.

I am, Sirs, yours faithfully,

Granville-pl., W., Feb. 9th, 1887. GEO. GRANVILLE BANTOCK.

THE FELLOWS AND MEMBERS OF THE ROYAL COLLEGE OF SURGEONS.

To the Editors of THE LANCET.

SIRS,—As the Association of Members of the Royal College of Surgeons is now taking the preparatory steps for the immediate presentation to the Privy Council of the petition which you kindly noticed in your journal about a month ago, it may interest your readers to know that we have obtained the large number of 4590 signatures of Members of the College to the same. The old taunt of the Council of the College that "some Members" only were desirous of this change in the election of the Council is thereby set at rest once and for all, for this is a very large proportion indeed of the whole number of the Members of the Royal College of Surgeons, and much larger than it seems at first sight, the calculation of the officials of the College as to the number of its own Members being hopelessly at fault. We find, and till the other day we had accepted this as correct, that the College Calendar gives a "list of Members" totalling 17,040, and most men would have thought that that was very nearly accurate. But upon reading three weeks ago that the College authorities had only sent out 987 polling papers to its Fellows, whose numbers appear on the Calendar as 1124, it occurred to us that a similar discrepancy between the actual and the *official* numbers of the Members might also exist. Nay, we expected, as we have found, a still greater difference; for whereas the Fellows are honoured by what calls itself an "Alphabetical Register," the poor Members are put off with only a "list." The distinction is most subtle. However, it may be presumed that the word "list" was chosen as not committing its promulgators to an endorsement of the accuracy of its contents. Now, we have gone most carefully through the Medical Register for 1886, published only four months before the last College Calendar, and find that the number of Members of the College upon it is only 11,821, which, to allow for errors in casting, we will call 12,000—that is to say, that five-seventeenths, or nearly a third, of the Members exist only upon that list, or in the imagination of its compilers. They *have* existed, it is true; but the College clings fondly to their memory, and mutters still, as Wordsworth's peasant child, "We are seven"-teen thousand! That our calculation is, in the main, correct is proved by an analysis of a sample of this "list." On page 89 we find 98 names of Members; of these, only 61 are on the Medical Register, to which we must add 2 who qualified in the interval between its publication and that of the Calendar, thus leaving 37 names of Members whose ghosts still linger round the College walls, awaiting the burial of their diplomas. We trust you will pardon this digression, but it is of importance with regard to the weight that the sum of these signatures should carry. That out of 12,000 Members of the Royal College of Surgeons, of whom a good 2000 are inaccessible, 4000 should have actively identified themselves with this movement by their signature should have great influence with the profession and with the Privy Council. We may, in conclusion, add that every signature is by a *bond fide* M.R.C.S., for we have checked each in the Medical Directory for 1887, and thus eliminated not only men who had signed before, but those few who signed in error, not holding the College qualification. We hope later to be able to give you a few local and other details of the signatures. We are, Sirs, your obedient servants,

WARWICK C. STEELE, WM. ASHTON ELLIS, Hon. Secs., Assoc. of M.R.C.S.

Western Dispensary, Westminster, S.W., Feb. 9th, 1887.

A CURIOUS LACRYMAL CASE.

To the Editors of THE LANCET.

SIRS,—The following case, which in my experience I am glad to say is unique, deserves a passing record.

On Saturday, Jan. 29th, a young man came to my clinic. The whole of the right side of his face was considerably swollen, puffy, and covered with scabs in places. About half an inch below the lower lid in the angle formed by the cheek and the nose, but far removed from the position of

the lacrymal sac, these crusts become unusually thick, and projecting from their centre was visible the upper extremity of a hollow silver lacrymal style. Struck by its unusual position, I began to seek for the distal extremity. This was found in the mouth between the gums and cheek, just above the socket of the right canine tooth. It had not perforated the mucous membrane owing to the discharge produced by its irritation having found exit through the cheek, but it could easily have been pushed through had it been of sufficient length. Any movement communicated to the cheek moved the whole tube *in situ*, and it had obviously never been in the proximity of the lacrymal apparatus or nasal duct. The way the operation must have been performed was no doubt as follows: The supposed position of the lacrymal sac having been determined, an incision through the skin was made over it. The subcutaneous structures having been reached, the style was pushed downwards, passing in front of the superior maxilla below the whole thickness of the cheek, and was there left. The tube had been in its present position for fourteen months, and it is needless to say the slight lacrymal obstruction which it was intended to have cured had derived no benefit. The case was seen by Dr. Davies, Mr. Wicks, Mr. Brewis, and other gentlemen who kindly assist at my clinic.

I am, Sirs, yours truly,

C. S. JEAFFRESON,
Sen. Surg. Northumb. and Durh. Eye Infirm.

Newcastle-on-Tyne, Jan. 29th, 1887.

EPIDEMIC DIARRHŒA.

To the Editors of THE LANCET.

SIRS,—In reference to your article in THE LANCET of last week, concerning our London water-supply as a possible source of distributing disease the following particulars may be of interest.

During the last four weeks the casualty and out-patient departments of the West London Hospital have been called upon to attend to an extensive outbreak of a severe form of diarrhœa. The cases have been very numerous, far exceeding those met with during the summer months, and also exceeding those in the severity of the attack. The symptoms in nearly all the cases have been sudden pain in the epigastrium, vomiting, incessant diarrhœa with (in a few cases) bloody stools, a rise of temperature (100·5° to 101·5°), followed by extreme prostration, and in two cases collapse. The duration of the attack has been from three to eight days. The districts affected were those of Fulham, Chiswick, and Hammersmith—an area too large for any common cause save those of atmosphere and water-supply.

I am, Sirs, yours truly,

CHAS. H. TAYLOR,
West London Hospital, W., Feb. 7th, 1887. House-Physician.

FRIENDLY SOCIETIES' MEDICAL ASSOCIATIONS: VIEWS AND EXPERIENCE OF A MEDICAL OFFICER.

To the Editors of THE LANCET.

SIRS,—Before entering a Friendly Societies' Medical Association, in which I stayed several years, I had no knowledge of such institutions, but thought they partook of the character of dispensaries and adapted for the necessities of the working classes of limited means. In this I was soon undeceived, and found it to be composed of an amalgamation of friendly societies' clubs within a radius of three miles, who sent delegates, one for each hundred or part of a hundred of its members, to form a general committee, who again appointed from their numbers annually a committee of management, consisting of president, vice-president, secretary, treasurer, trustees, three auditors, and nine members, the secretary and auditors being paid for their services. The managing committee, seven of whom formed a quorum, sat once a month, the general committee once a quarter, except under special circumstances. The medical officers were appointed by the general, after being selected by the managing committee, the senior medical officer living on the society's premises, having to sign an agreement, stringent in its particulars, such as to finding all surgical instruments, not to absent himself from work either through illness or otherwise, unless supplying his place by a duly qualified practitioner as substitute, not to practise within four miles of the town, under a penalty of £100, except he has served the society five years, there being no equivalent if he is given, with or without cause, three months' notice as by agreement. The objects of the Society were to supply certificates, examine candidates for the various societies, give advice and medicines, and to visit within a radius of three miles members at their own homes. The hours of the dispensary were from 9 to 10 morning, 1 to 2 afternoon, and 6 to 8 evening, the rest of the day being consumed by visiting the sick and attending midwifery if forthcoming. For visiting, except in cases of emergencies, notice had to be left at the dispensary before 10 A.M. This rule was never strictly carried out. Sunday, although supposed to be a day of rest, the visiting, &c., only being in cases of sudden illness, yet members would worry on that day more than any other, and that from morning till night. The only holidays in the year were Christmas Day and Good Friday, if nothing happened. The medical staff of the Society, which numbered about 4000 members, consisted of one resident, and one non-resident, there being no dispenser. The members, their wives and children, also lodgers and relatives over eighteen, and living under the same roof, paid 1*s.*, and children and others under eighteen years of age paid 6*d.* per quarter, accouchements 10*s.* 6*d.*, vaccination free. Juvenile members of the various societies could include in the benefits of the Association their parents, grandfathers, &c. Members were composed of tradespeople (some in good circumstances), clerks, artisans, and labourers, also retired individuals of various callings. Often the attendance at the surgery came to 100, sometimes 180 in the day, not counting the visits at the patients' homes. Calls for visits were frequently required for most trivial complaints. Abuses on the members' part are taken no cognisance of, in fact, no rule applied to any such charge against a member, but two rules applied to complaints made by a member or his family against the medical or other officers.

The salaries of the medical officers were the following: Resident, £180; non-resident, £120. Extras, midwifery fees paid to the officer attending, at first, 8*s.* 6*d.*, afterwards 10*s.* 6*d.*, the 2*s.* being allowed for out-pocket expenses to drivers when going long distances, cabs being on contract terms. An allowance at first of £10, then £15, per annum to resident medical officer for coals, gas, cleaning, &c., this applying to waiting-room, used also for auditors, managing committee meetings, and others; also supplying gas to surgery, consulting-room, lamp to gate, &c. Formerly, what the club doctor lost through the members he gained by the families. Now, under the Association plan, not only the families of the poorer, but those of the well-to-do portion of the members belong to it, thus seriously affecting the medical interests, as instead of about £700 being the annual receipts, as in the Society to which I belonged, and then not all paid to the medical staff under the old system, at the lowest estimate three times as much would accrue from the same numbers, and would all go to the medical profession.

I am, Sirs, yours faithfully,

Feb. 8th, 1887. SURGEON.

SURGICAL TREATMENT OF HYDATID CYSTS OF THE LIVER.

To the Editors of THE LANCET.

SIRS,—Permit me to make a short comment upon your leading article (Feb. 5th, 1887) on the Surgical Treatment of Hydatid Tumours of the Liver, which is founded on my paper and the ensuing discussion at the Medico-Chirurgical Society. You say that I "did not show that this escape of contents [hydatid fluid] has been a serious sequela of the operation as more usually performed." I even went further, stating that the escape of a small quantity of saline and usually non-albuminous fluid would not in the majority of cases set up septic peritonitis, that with this fluid, however, a certain number of scolices might be carried into the peritoneum, and give rise secondarily to hydatids more or less diffused in that cavity. I would, therefore, in view of both these possibilities, avoid any effusion of hydatid fluid into the abdominal cavity. The question appears to me to be not whether a certain number of operations, otherwise performed, have terminated favourably, but whether the procedure I have advocated avoids, as I contend it does, the dangers alluded to more surely and

completely than any other method. As for the supposed heavy price to be paid for this extra degree of safety by dividing the operation into two stages, I must point out that this price is *nil*, for the second stage consists merely of an incision not into the patient, but into an hydatid cyst. It presents itself as a detail of dressing; the parasite may perhaps feel the cut—the patient most certainly does not.

I am, Sirs, your obedient servant,

Feb., 1887. RICHARD BARWELL.

DR. BRUNTON AND HOMŒOPATHY.

To the Editors of THE LANCET.

SIRS,—You are quite right in your remark on Mr. Bateman's note that "it is not the use of any particular drugs that constitutes homœopathy"; but that is not all that we allege against Dr. Lauder Brunton in reference to his work on Pharmacology, &c. Dr. Brunton not only takes a large number of his drugs from the homœopathic materia medica, but he likewise takes his indications for the use of these drugs from homœopathic works. Where else could he derive his knowledge that pulsatilla is a remedy for acidity, diarrhœa, earache, and epididymitis; that bryonia is useful in pleurisy, pneumonia, meningitis, peritonitis, and rheumatism; that thuja is good for condylomata; viola tricolor and rhus toxicodendron for eczema; gold for ozæna; achillæa for uterine hæmorrhage; ignatia for hysteria, melancholia, infantile convulsions, and nervousness; and fifty other remedies and their indications strange to old physic? Dr. Brunton gives in his book a bibliographical index with lavish references about the medicines commonly used in your school, but not a single reference about the medicines which homœopathy has introduced into medical practice. Why is this? Did Dr. Brunton rediscover all these remedies and their indications for himself? I know Dr. Brunton is a very clever man who has made many experiments with drugs on many frogs, but if his researches in this field had taught him the above uses of these drugs, he would certainly have told us. So we are driven to the conclusion that Dr. Brunton has borrowed extensively from homœopathy, but has studiously withheld from his readers the source of these borrowings, and, for anything that appears to the contrary in his book, he assumes to himself all the credit of all these remedies and their indications, so strange to the practice of your school. Is this the right thing for a medical author to do? We may be a contemptible sect in the eyes of an orthodox author, but it is surely carrying cynical contempt for the rival school a little too far to "convey" a large number of their chief remedies into his book, and to conceal carefully the source whence he has taken them. Does not Dr. Brunton owe the profession some explanation of his extraordinary conduct.

I am, Sirs, your obedient servant,

London, Jan. 29th, 1887. R. E. DUDGEON.

INEQUALITY OF THE PUPILS IN VARIOUS DISEASES.—CAUTION IN THE ADMINISTRATION OF SALICYLIC ACID.

To the Editors of THE LANCET.

SIRS,—In your impression of last week I noticed amongst your annotations some remarks published by Dr. Pasternatski on the inequality of the pupil in certain diseases, and on careful reading I am surprised to note, although several diseases are mentioned where this phenomenon is observed, no allusion is made to its occurrence in tubercular meningitis. Now, as far as my experience goes, it is in this disease (especially in young children) that this symptom is frequently to be noticed, and is of great pathognomonic value, indeed pre-eminently so as regards diagnostic importance, where the signs of this disease are masked or obscure. I have never had a case where death has followed the diagnosis of tubercular meningitis without the inequality of the pupils having been a prominent and early symptom, so much so that I have been induced to exclude the diagnosis of this disease if this symptom is absent; and in every case that has resulted in recovery from, as I have thought, tubercular meningitis, this symptom was not present, and consequently I believed I had been mistaken in my diagnosis; and perhaps this is why I am very sceptical as to the recovery from genuine tubercular diseases of the membranes of the brain.

If it will not make my letter too long, I would wish to add I have seen no notice taken of the case you publish in your Clinical Notes of THE LANCET of Dec. 18th as to the need of caution in the administration of salicylic acid. The fatal result there mentioned, in my opinion and probably of others, was in no way due (unless the drug was impure) to the medicinal dose given (15 grs.) of that remedy. True, the symptoms did not appear to call for its administration, for there was *no fever* or history of malaria; and even if symptoms were due to latent rheumatism as was supposed, other remedies might have been preferable. It would be regrettable if, in the case published, the *post hoc* and not the *propter hoc* should cause needless fear and prevent the proper use of this very valuable medicine.

I am, Sirs, your obedient servant,

Jan. 15th, 1887. FREDK. H. ALDERSON, M.D.

DIPHTHERIA AND MILK.

To the Editors of THE LANCET.

SIRS,—The prevalence of diphtheria renders it incumbent on all who have opportunities of studying its causation or propagation to ventilate their views. I wish to offer a small but important contribution to the subject of propagation of diphtheria and other diseases by milk-supply, and also to make a suggestion with regard to preventive measures. It has frequently happened to me to see the household milk-can, supplied by the dairy, in the patient's room and in close proximity to him, and even used by him to drink from. Some residue of milk, in all probability highly infectious, is returned in the can to the dairy, where it may or may not (often, I fear, the latter), be subjected to the action of boiling water or steam. If, as must often happen, it is simply rinsed in hot water with many others, these are in turn infected, and will affect the milk supplied to various households. Medical men would be doing a great public service in the cause of disease prevention by giving orders in every household where infectious disease exists that no milk-cans be taken into such houses at all.

I am, Sirs, your obedient servant,

H. CAMPBELL POPE, M.D. Lond., F.R.C.S.

Goldhawk-road, W., Feb. 1887.

UNIVERSITY OF EDINBURGH.

To the Editors of THE LANCET.

SIRS,—With reference to your annotation in last week's issue, permit me to inform you that no "gross charges" were brought against my late assistant by me, nor were illegal charges of any kind intentionally made against him, even by imputation.—I am, Sirs, yours obediently,

Feb. 9th, 1887. W. RUTHERFORD.

THE SANATORIUM BUILDINGS OF KINGSTON-UPON-HULL.

To the Editors of THE LANCET.

SIRS,—In reference to your criticism upon the annual report of the health of the borough of Kingston-upon-Hull, which appeared in your issue of Jan. 1st, attention is directed to the new Sanatorium buildings, which are stated to be defective. The washhouse mentioned in your criticism is twenty-three feet from the road, and it is intended that all articles before being removed from the fever blocks will be disinfected by being placed in a solution of some reliable disinfectant and conveyed away in proper receptacles provided for the purpose, and its situation was so planned that persons engaged could in nowise be in communication with the hospital buildings. The wards for probationers are distant some thirty feet from the administrative department, being connected only by a covered way. The greatest care has been exercised in the construction of the building, and the plans have been submitted to various eminent authorities, also to Her Majesty's Local Government Board inspectors, during their sanitary surveys.

I am, Sirs, yours truly,

JOHN W. MASON,
Medical Officer of Health for the Town and Port of Kingston-upon-Hull.

Town Hall, Hull, Jan. 19th, 1887.

*** The publication of the above letter has been unavoidably delayed.—ED. L.

THE PRESENCE OF BLOOD IN THE PERITONEAL CAVITY.

To the Editors of THE LANCET.

SIRS,—I can unfortunately claim no credit for the conclusions as to the necessity for reconsidering the advisability of operation in cases of extravasation into the peritoneal cavity which Mr. Lawson Tait ascribes to me in your issue of last week, and to which, by implication, he raises such strong objections. These conclusions are not to be found in my thesis, but are those of the writer of the article referred to, who has viewed my experiments and observations chiefly in their bearing on this important practical question. On the question of the advisability or non-advisability of operation in such cases, I am not qualified, nor have I ventured, to speak. My experiments, so far as they bear on this question, deal almost exclusively with the fate of the extravasated blood—the conditions influencing its absorption, and the extent to which its red corpuscles are at once absorbed back into the circulation. Any conclusions, however, which have been arrived at will be found to differ very materially from those of Mr. Lawson Tait, when he allows himself to state, without bringing forward any facts to support his assertion, that the function of the peritoneum in man differs "most materially" from that of the peritonea in dogs and rabbits.

I am, Sirs, your obedient servant,

Edinburgh, Feb. 7th, 1887. WILLIAM HUNTER, M.D.

LIVERPOOL.

(From our own Correspondent.)

THE ASSIZES.

THE South-west Lancashire assizes, which are held in Liverpool four times a year, include all local and county cases within a certain radius. Occasionally cases which should have been tried in Manchester are tried here. The present assizes commenced on the 4th inst., before Mr. Justice Hawkins, and comprise a very large number of cases, some of a very serious character. One, which is known as the Oldham poisoning case, will for several reasons assume most of the characters of a *cause célèbre*. The prisoner, who was at the time of the occurrence a nurse in the workhouse at Oldham, is charged with having murdered her daughter, a girl eleven years of age, by administering a corrosive poison. One remarkable circumstance in connexion with the case is that though the prisoner has been committed on the coroner's warrant, the magistrates dismissed the case.

FATAL ACCIDENT TO A FIREMAN AND REMARKABLE ESCAPES.

Liverpool is justly proud of its fire brigade, and, considering the very dangerous character of their calling, it is remarkable how few fatal accidents occur either to the firemen or to the police officers who assist them. At a recent warehouse fire a wall fell down, killing a constable instantaneously, and injuring, though only slightly, a number of others. It was not known that the deceased constable was at the fire, he not having reported himself, but as he was missing search was made, and his remains were found in the ruins. The escape of all those firemen on whom the wall fell is little short of miraculous.

APPOINTMENT OF OCULIST TO THE ROYAL INFIRMARY.

It having been resolved by the Committee of the Royal Infirmary to create an additional medical officer as oculist, Mr. Thomas Bickerton has been selected as the first holder of the office. Mr. Bickerton, who is the son of a former oculist in this city, is known by his painstaking inquiries into the subject of colour-blindness.

SWING-BOAT FATALITY.

An inquest was recently held at Bootle on the body of a young woman who was thrown out of a swing-boat on the 5th inst., and died soon afterwards from the effects of the fall. The police sergeant stated that five accidents from swing-boats had occurred to his knowledge within the last three months, and he had heard of numerous others. The proprietor of the swing-boat admitted that they were allowed to go level high, and it appeared that half an hour after the accident the swings were going as high as before. A verdict of "Accidental death" was returned, and the proprietor of the swing-boat was severely censured for the manner in which he gave his evidence.

THE INFECTIOUS DISEASES HOSPITAL.

The Hospitals Committee of the Corporation are advertising the office of visiting physician to the Netherfield-road Hospital, at a salary of £100 per annum. The office, which is a newly created one under the Corporation, will be of great importance, and much interest is felt as to who will be first appointed.

Liverpool, Feb. 9th.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

NEWCASTLE INFIRMARY.

THE annual meeting of the governors of the Newcastle Infirmary was held on Thursday, the 3rd inst., and in view of the proposed changes so strongly recommended by the Special Committee, and which were the subject of a previous letter from me, the meeting was looked forward to with considerable interest, especially by the medical staff and students, whom, as I have told you, the committee handled in rather an ungracious manner. The annual report showed that during the year 3175 in-patients had been admitted, being 329 more than during the previous year. The average stay of each patient in the hospital had been 29·6 days. In the four years immediately preceding it was 30·1, 31·2, 36, and 39, so that in this respect there has been a gradual improvement. The death-rate for the year had been 6·55 per cent. The average cost of each patient had been £3 17*s.* 11¼*d.* This was much smaller than in some previous years. The cost of each occupied bed during the year had been £48 1*s.* 2*d.*; in 1885 it had been £50 16*s.* 6*d.* The number of out-patients received during the year had been 4641. The result of treatment of the in- and out-door patients during the year has been: in- and out-patients cured, 5490; relieved, 1697; in- and out-patients still under treatment, 421. The number of casuals that have been treated during the year is 19,624, against 27,811 in the previous year. The reason of this large diminution is that at the quarterly meeting of governors on July 8th it was resolved to charge casualty patients 3*d.* on each visit from Aug. 1st. The effect of this resolution is seen in the following figures:—From Jan. 1st to July 31st 14,178 patients were relieved, but from Aug. 1st to Dec. 31st only 5446 applied for relief. Of these, 4385 paid the amount charged, and 1061 were relieved without payment on account of their poverty. The report states that it is the opinion of the resident medical officers, to whom the care of casuals is committed, that after the charge of 3*d.* had been made a superior class of patients presented themselves, persons who would not accept of charitable assistance, but had no objection to be cured cheaply, while the very necessitous diminished in numbers. The resolution of the governors expressly provided for the destitute, but at present the report states "they appear to be scared away." The famished and ill-clad children of destitute or drunken parents, it is pointed out, are subject to a variety of diseases, for the relief of which they had hitherto resorted to the infirmary. These, the report states, are a class deserving of sympathy, and it says that the resolution imposing a charge of 3*d.* on each casual will be again taken into consideration after the plan has been in operation a year. The statistics as to the various classes of operations are interesting, but would take up too much space to record here. The report states, in speaking of the major operations, "that probably few hospitals, if any, could give so favourable a report of this serious class of operations," and that therefore "the situation of the Newcastle Infirmary cannot be so insanitary as it is supposed sometimes to be." The report then alludes to the grave pecuniary position of the infirmary. The whole expenditure of the year had amounted to £13,695, showing a diminished outlay, notwithstanding an increase of patients, of £252 10*s.*, but yet exceeding the ordinary income by £5325 6*s.* The report went on to say "we began the year with an overdraft due to the treasurer of £5403 4*s.* 4*d.* The whole of the ordinary income of the year has been used

up, together with £141 received in subscriptions for the completion of the Ravensworth ward, in addition to this £3000 consols, part of the capital of the institution, has been sold." Notwithstanding all this, the institution finds itself at the close of the year in debt to the treasurer in the sum of £6450 11*s.* 10*d.* To meet this deficit corporation bonds to the amount of £4000, also forming part of the capital, had been sold, still leaving a debt due to the treasurer of £2450 11*s.* 10*d.* A very animated discussion took place on the reading of the report, as also on the report of the Special Committee, but this last was referred to the Medical Board and two other committees, to report to a special meeting of governors to be held on the first Thursday of next March. It is apparent that the infirmary cannot go on in its present condition, and the whole drift of its affairs is in the direction of a free hospital, and the giving none of the responsibility of its support to the artisans of the district, who more directly benefit from it than any other class.

LEEDS BOROUGH HOSPITAL.

Leeds has been of late years remarkably free from epidemics of typhus, although in past times the resources of the Fever Hospital were frequently strained on this account. Within the past few months, however, there has been a serious amount of this disease, and about sixty cases have been received in the Borough Hospital. No less than seven of the nurses have been infected, fortunately with no fatal result, and the general mortality has not been high. The Borough Hospital, lately under the management of a committee as a public charity, has been acquired by the sanitary authority, and modernised from the old "corridor" type into a building more in accordance with modern requirements. Some further improvements, however, as to warming and ventilation, are, I believe, to be considered, at the suggestion of the medical advisers of the Local Government Board.

Newcastle-on-Tyne, Feb. 7th.

EDINBURGH.

(From our own Correspondent.)

PRESENTATION TO SIR DOUGLAS MACLAGAN.

ON Monday afternoon a large assembly of ladies and gentlemen gathered in the Freemasons' Hall on the occasion of the presentation of his bust and portrait to Sir Douglas Maclagan by his friends and admirers. The platform, which was tastefully decorated with palms, was occupied by a number of leading men in the city and the University, amongst them the Lord Justice-General (Chancellor of the University), Lord Balfour of Burleigh, Lord Moncreiff, the Lord Provost of Edinburgh, Principal Sir W. Muir, Professors Crum Brown and T. R. Fraser, and many others. On the motion of Sir Alexander Christison, the Lord Justice-General (Lord Inglis) took the chair. Apologies for absence were intimated from Mr. Erichsen, Sir Joseph Fayrer, Sir Noël Paton, Lord Trayner, and others. To the right and left of the chair were the bust and picture of Sir Douglas Maclagan, both veiled; Sir Douglas himself and Miss Maclagan occupied seats to the right of the chair. Lord Inglis, in making the presentation, referred to his own early comradeship with Sir Douglas when they entered the High School together, and to the long years of close friendship that have followed. He did not venture to sum up his professional attainments and achievements in the presence of so many of Sir Douglas's professional compeers, but referred to some of the special honours which those merits have won him; making mention of the fact that Sir Douglas has held the office of President of both of the Royal Colleges, and of the honour recently received at the hands of Her Majesty the Queen in recognition of his varied public services. Lord Inglis then spoke of the veteran service rendered to the University by Sir Douglas during his tenure of the Chair of Medical Jurisprudence for nearly a quarter of a century, and of the great expansion that has taken place in the practical and theoretic instruction in public health under his personal supervision. Turning to the other side of his character, the speaker described Sir Douglas as "a man of highly cultivated mind, well versed in literature, both classical and modern, a poet, a sweet singer, an ardent sportsman, a loyal Volunteer, and a great officer in Her Majesty's body guard for Scotland. He has been, and is all this, just because his habits have been so active and sprightly, because he has such a happy and lovable disposition, without the slightest trace of cynicism or gall, and because of his inclination at all times to look on the best and brightest side both of men and things." The bust and the picture were then unveiled amidst great applause, and were formally presented by Lord Inglis. Sir Douglas Maclagan, in accepting the bust, spoke of the peculiarly delicate nature of the circumstances in which he found himself, and of the difficulty of expressing adequately his sense of the kindness showered upon him in so overwhelming a manner. Referring to the proverb of the empty vessel making the loudest sound, he attributed any incompleteness of his utterance to his being replete with gratitude. On behalf of himself and Miss Maclagan, for whom the portrait was destined, Sir Douglas accepted also the remarkably faithful likeness painted by Mr. George Reid, R.S.A., to whose talent, as to that of Mr. Hutchison, the sculptor, he paid a warm tribute. Votes of thanks were accorded to these gentlemen for the admirable way in which they had carried out the wishes of those concerned in the presentation; also to Dr. Gibson, the treasurer, and Mr. Lyell and Dr. Ashdown, the secretaries, whose efforts have so efficiently realised the object in view. A similar compliment to the chairman terminated the proceedings.

THE STUDENTS' UNION.

The final adjustment of the accounts of the recent monster bazaar shows that between £10,000 and £11,000 are available for the purposes of erecting the University Union. A site in close proximity to the new medical buildings has been selected, and plans of the proposed edifice are now in course of preparation.

THE LORD RECTORSHIP.

The Lord Rectorship, vacant through the lamented death of Lord Iddesleigh, presents a question of some difficulty. It is thought very undesirable that another contested election should be fought out so soon after the last struggle. A proposal that his Royal Highness the Prince of Wales should be requested to fill the office has been very graciously negatived on his behalf. It is hoped, however, that a candidate may still be forthcoming in regard to whom there will be no clashing of party sentiment, and whose unanimous election may be secured.

ASYLUM APPOINTMENT.

The Colonial Secretary has appointed Mr. J. B. Spence, M.A., M.B., assistant-physician at the Royal Edinburgh Asylum, to be Medical Superintendent of the Ceylon Asylum.

Edinburgh, Feb. 8th.

DUBLIN.

(From our own Correspondent.)

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE question of the College forming dual combinations with the College of Physicians and the Apothecaries' Hall of Ireland was under discussion at a meeting of the Council of this College last week. Although there is no doubt that the combination would be a legal one, yet under present circumstances it has been thought advisable not to move in the matter; but there is a strong probability of a dual scheme being formed at no distant date. The College (see *ante*, page 102) have resolved to constitute a diploma in public health, and have matured a scheme of examination. Details will shortly be published, but it may be mentioned that all candidates who possess a registrable qualification will be eligible for the diploma. The Council have adopted a vote of condolence with the family of the late Mr. Denham, an ex-president of the College.

DUBLIN SANITARY ASSOCIATION.

The annual meeting was held last week, the inaugural address being given by the President, Dr. Grimshaw. He showed that Dublin alone of all the great towns of the United Kingdom had an increased death-rate, after having for ten years enjoyed in common with other cities the advantages of improved sanitary laws and the opportunities for improved administration. From the annual report of the Association it would appear to be doing good work, but the results of its operations, it must be confessed, are not very

tangible. It will surprise many to learn that for the ten years ending 1884 about 3500 more lives were lost than in the previous decade, while in other cities the gain has been relatively greater than our loss. It must not, however, be forgotten, as Dr. Grimshaw points out, that it takes a long time for sanitary measures to make a marked impression on a previously delicate population, and a still longer time to produce a permanent improvement.

THE LATE G. E. BRUNKER, M.D., F.R.C.S.I.

At the advanced age of eighty-three years, Mr. Brunker died at his residence near Dublin, on the 2nd inst. He graduated in medicine at Edinburgh in 1826, and obtained the Fellowship of the Royal College of Surgeons in Ireland in 1844. He held the post of surgeon to the Louth County Infirmary for a considerable period, and on his retirement from practice settled in Dublin. He took a very active part in getting an alteration made in the Charter of the College of Surgeons, so as to allow provincial and other Fellows to vote for the election of President, Vice-President, and Council by voting papers. A resolution was proposed by Mr. Brunker to this effect in June, 1883, and was adopted at a meeting of the Fellows. He was for a short time a member of the Council of the College.

SIR P. DUN'S HOSPITAL.

At a special meeting of the governors, held recently, a cheque for £1000 was received, being the amount of a legacy left by a Mrs. Hughes to the hospital. The executors requested that the money should be expended towards the construction of separate wards for the treatment of fever patients, in accordance with the wish of the deceased lady. The amount has been lodged to the credit of the Fever Wing Fund. The available funds, in consequence of the difficulty of obtaining rents from the estate of the hospital, have been seriously diminished, and the governors during the past six years have been obliged to sell out stock to the amount of £3500, to meet the expenses of the institution.

HEALTH OF DUBLIN.

The deaths from zymotic diseases during the past quarter numbered 318, being 14 above those recorded for the previous quarter. Over 32 per cent. of the mortality from zymotic affections was due to scarlatina, which caused 103 deaths, or 60 in excess of the preceding three months. Six deaths were attributed to cerebro-spinal fever, a disease which may be said to have existed as an epidemic in Dublin for the past eighteen months.

THE LATE DR. O'CONNELL.

The remains of the late Dr. O'Connell of Kilmallock were interred in the family burial-ground at Ballingaddy on Saturday, the 29th ult. The deceased served as a surgeon in the British army, and took part in various engagements in Spain in 1830 to 1835. For his services he was presented with a gold medal of the Legion of Honour by Queen Isabella, and the honour of knighthood was conferred upon him (Knight of the Order of St. Ferdinand) for attending the Queen in her accouchement.

FOOTBALL.

One of the players at the International Football Match (Ireland *v.* England), which was held on Saturday last in Dublin, received a severe injury to the head, and is now suffering from concussion of the brain.

Sir George H. Porter, surgeon to the Queen in Ireland, was last week sworn in as High Sheriff of co. Wexford, in the Court of Exchequer, before the Lord Chief Baron.

Dublin, Feb. 8th.

THE SUBSOIL OF LONDON STREETS.—The Chairman of the Board of Works, Sir J. M'Garel-Hogg, M.P., has introduced a Bill for conferring further powers on the Board with respect to the subsoil of streets and the laying of mains or pipes. It proposes that without the consent of the vestry or the district board no road is to be made over land where the sand, gravel, or subsoil has been taken away. And without this consent none of this subsoil under a road already made is to be removed. In cases where this consent is given, any conditions may be imposed. But in such cases and in case of the consent being refused, an appeal is permitted to the Board itself. Similar restrictions as to obtaining the approval of the vestry or board as to depth, position, and course are imposed by the Bill with respect to laying mains or pipes under any new street.

PARIS.

(From our own Correspondent.)

THE HEALTH OF PARIS.

HITHERTO the supply of putrid Seine water in the place of that of the Vanne has not had any appreciable effect upon the mortality. Indeed, the number of deaths from typhoid recorded in the last *Bulletin de Statistique Municipale* was much smaller than usual. It is a matter, however, of common observation that typhoid has increased in frequency, and in the Montparnasse quarter more particularly bowel complaints of an unusual kind are exceedingly prevalent. According to Dr. Roussel, who is well known in England in connexion with transfusion, there is an epidemic of hæmorrhagic convulsive enteritis in this district. Whilst passing along the street a few days since he saw a child fall down in a fit and void blood. A summary inquiry elicited the fact that attacks of this kind were quite common amongst the children of the poorer classes, and further investigation showed that they only occurred in the families of those who are supplied with offensively-smelling water. I may mention, as one instance out of many, that several *employés* of a large administration are now absent on account of bowel troubles, and those who are not actually ill are suffering from intestinal irritation.

PASTEURIANA.

With the exception of the appearance of the first number of the "Annales de l'Institut Pasteur," the past week has been comparatively uneventful. The official delegate of the Portuguese Government has, it is true, made known, in a letter to the *Gazette des Hôpitaux*, his impressions upon the subject, but they are too vague to amount to an opinion. Unless I am mistaken, the writer has not yet made up his mind as to the value of the method; although he is inspired with respectful veneration for M. Pasteur himself. In my last letter the name of the physician who made the post-mortem examination in the case of Bergé was written "Peter." To M. Peter I referred a few lines further on, but the Dean of the Faculty of Bordeaux mentioned in the preceding paragraph is M. Pitres, an eminent pathologist, and one whose opinion upon the case in question will be authoritative.

CHLORAL ERUPTION.

Dr. Barbillion contributes a paper to the *Archives de Physiologie* upon a variety of erythema appearing in patients under the influence of chloral, upon the administration of alcohol. The chloral eruption was first recognised by Jastrowitz in 1869, and has since been met with by numerous observers. The point to which Dr. Barbillion calls attention is the almost mathematical regularity with which the exanthem appears under certain circumstances. Given a child of from four to eight years of age, who is taking from two to four grammes of chloral daily in repeated small doses, the administration of alcohol in the form of wine or spirit mixture will cause the appearance of the rash in from fifteen to thirty minutes.

ALCOHOLISM.

That the best remedy for alcoholism lies in the restriction of the use of alcohol seems almost a foregone conclusion. But in the present condition of public exchequers there are few ministers of finance who would venture to adopt such a measure, and hence intemperance in the use of spirituous liquors is almost universally tolerated, if not encouraged, in the interest of the revenue. And yet it is admitted in France that 40 per cent. of the cases of mental alienation, and one-half of the murders committed, to say nothing of minor consequences in disease and crime, are due to alcohol. This great question of intemperance, its causes and results, has been the subject of a number of independent studies lately by economists, humanitarians, and scientific men, and there is a growing opinion that the evil is not wholly incurable, and that there is even a possibility of dealing with it to the satisfaction of all legitimate interests. Alcoholism does not necessarily result from the abuse of alcohol. At the recent discussion on the adulteration of wine at the Academy of Medicine the speakers were agreed on this point. Excess in the use of alcoholic drinks of good quality causes simple inebriation, which has its train of morbid symptoms, but these are quite different from those

of alcoholism. The classical drunkard, merry and expansive in his cups, the true "knight of the burning lamp," common enough in Burgundy, where the good wine is evidently kept for home consumption, is seldom met with in Paris. The *ouvrier*, who drinks in the capital, is pale and wasted, and when excited becomes aggressive. If his existence is not cut prematurely short by accident or disease—and under the former heading must be included suicide and the scaffold,—it generally ends in the hospital or the asylum, and his children, if there are any, have the same prospect for their sole inheritance. Notwithstanding the increasing prevalence of diseases due to alcoholism, it is stated by M. Aglade, who delivered a lecture on the subject a few days ago at the Sorbonne, that drunkenness is not on the increase. It is the toxic property of the alcohol consumed that has become greater, and the remedy exists in the prevention of adulteration. Formerly intoxication was induced with ethylic alcohol distilled from wine, but at the present day, of 1,872,000 hectolitres of alcohol consumed annually in France, scarcely 25,000 are extracted from wine. The remainder is derived from potato, beetroot, rice, maize, &c. Some of these so-called "higher" alcohols are extremely dangerous ones. Amylic alcohol, for instance, is seven times more toxic than the ethylic, 1·1 gramme per kilogramme of body-weight being a fatal dose. The statements of the lecturer were illustrated by experiments upon dogs and guinea-pigs, which were watched by the public with interest, and not disturbed by any hostile manifestations. A small quantity of ethylic alcohol being injected under the skin of a guinea-pig, the animal became lively, but was not otherwise disturbed. The same quantity of amylic alcohol administered in the same way to another guinea-pig was followed by paralysis of the legs, and it died, as if stunned, in a few minutes. The experiment being repeated upon dogs, gave similar results. With ethylic alcohol there was merely increased liveliness; with amylic alcohol, stupor and inertia. But when absinthe was used, the injection of less than a cubic centimetre caused death in a fit of furious delirium. The remedy for alcoholism proposed by M. Aglade is the supply of unadulterated alcohol, which should be a State monopoly, and this would not only reduce the evils of drink to a minimum, but, according to M. Aglade, the revenue would gain more than £40,000,000 a year.

MEDICAL NOTES IN PARLIAMENT.

The Lunacy Laws.

IN the House of Lords, on the 7th inst., the Lord Chancellor moved the second reading of the Lunacy Bill. He stated that with the exception of one controversial matter the measure was substantially the same as that which on two previous occasions had been agreed to in that House. He believed that no alteration of the law would be satisfactory if it did not make further provision for the liberty of the subject. The Bill made it a condition of the power of restraint that upon every person alleged to be a lunatic there should be served a notice, giving him information that if he pleased he could be taken before a magistrate.—Lord Herschell, in supporting the second reading, said he sympathised with the desire of his noble and learned friend to safeguard the liberty of the subject as much as possible, so far as it could be done with safety to the lunatic.—The Earl of Milltown hoped their lordships would take steps to prevent an abuse of the Lunacy Laws, and to increase the visiting power of the Lunacy Commissioners.—The Bill was read a second time.

The Lord Chancellor then moved the second reading of the Lunacy Bill, the object of which, he explained, was to codify the Acts of Parliament, numbering something like 30, dealing with the subject of lunacy.—The Bill was read a second time.

The discussion of the Lunacy Acts Amendment Bill in Committee in the House of Lords has been fixed for the 21st inst., instead of the 15th inst., the date to which the Committee was originally postponed.

The Military Colleges.

In the House of Commons on the 3rd inst., in reply to Sir H. Tyler, Mr. Stanhope stated that, as regards the Royal Military Academy, the provision of increased sleeping accommodation and of hot water for the bath-rooms will be proceeded with when funds are available after the completion of more urgent services. No room in Herbert's Hospital can at present be made available as an infectious ward for cadets. As regards Sandhurst, steps have been taken to carry out the recommendations that the riding school be lit with gas, that better furniture be provided for the cadets' ante-rooms, that windows be added in certain rooms, and that a dressing-room be added to the gymnasium; but funds are not as yet available for building accommodation for the servants on the college estate.

Mad Dogs and Hydrophobia.

On the 8th inst., Lord John Manners, in reply to Mr. H. S. Wright, stated that the enforcing of the regulations respecting the muzzling of dogs lay in the hands of the local authorities, and that the Government did not intend to take further steps in the matter of regulations.

In reply to Mr. Coghill, who asked whether the Government intend taking any steps to found an institution in London similar to M. Pasteur's in Paris for the gratuitous treatment of persons who have been bitten by mad dogs, Mr. Ritchie said that the report of the committee now investigating the Pasteur system would, when presented, receive careful consideration.

Dover Barracks.

Mr. Stanhope, in reply to Mr. Norris, said that since the death of Lieutenant Jarrett, in December last, a thorough inspection had been made of Dover Barracks, but no insanitary conditions had been discovered. Every precaution against an outbreak of typhoid fever had been adopted. The medical officer of the district was responsible for the sanitary condition of the barracks.

The Condition of the Thames.

Mr. Bigwood gave notice of his intention on an early day to move the appointment of a Select Committee to inquire into and report on the state of the River Thames in the neighbourhood of Richmond, Twickenham, and Brentford, and to consider what remedies might be applied.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT an ordinary meeting of the Council of the above College, held on Thursday, the 10th inst., the following motion was passed:—"That, as recommended by the Court of Examiners, it be referred to the Committee of Management to consider and report to the two Colleges on the advisability of extending the rule by which, under the old regulations, candidates obtaining fourteen out of the fifteen marks required to pass the examination in Surgery are admissible to re-examination after a period of three, instead of six, months' additional study, to those candidates examined in Surgery under the regulations of the Examining Board in England by the Royal College of Physicians of London, and the Royal College of Surgeons of England."

The report of the committee on the extension of the College premises was received, approved, and adopted. The report included the following recommendations:—

"1. That the College premises be extended in the manner proposed in the first report; but that the alterations thereby occasioned be carried out gradually, and be subject to such modifications in matters of detail as the Council, on the recommendation of the Committee, may hereafter approve. 2. And that the Committee be authorised to make arrangements for the erection, with as little delay as possible, of an additional Museum, as shown in the plans, on the ground occupied by the back premises of Nos. 43 and 44, Lincoln's-inn-fields, abutting on Portugal-street, and for the construction of an additional storey to the main building of the College to accommodate the new work-rooms, at an approximate cost of £10,000 for the new museum, and £5000 for the new work-rooms."

To carry out Sir T. Spencer Wells' resolution the Council elected a committee, consisting of Sir James Paget, Sir T. Spencer Wells, and Mr. John Marshall, with the President and Vice-President, to confer with a deputation from the Association of Fellows and from the Association of Members on the subject of the first resolution, passed at the meeting of Fellows and Members on Nov. 4th of last year.

Mr. H. G. Howse was elected a member of the Court of

Examiners in Surgery, in the vacancy caused by the resignation of Professor Humphry.

A communication was read from the Registrar of the Royal College of Physicians, informing the Council of the appointment of a deputation consisting of the President, Treasurer, and Registrar, to confer on the question how the two Colleges may duly celebrate conjointly the Jubilee Year of Her Majesty's reign. The Council appointed the President and two Vice-Presidents to meet these delegates.

Another communication was read from the Registrar of the Royal College of Physicians, inviting the College to associate itself with the former College in granting the diploma in public health. The invitation was accepted by the Council, and it was referred to the Committee of Management to devise a scheme for carrying out the necessary arrangements for the purpose, and report them to the two Colleges.

A communication was read from Mr. Handfield Jones, forwarding the resolutions passed at the St. Mary's Medical Society concerning the title of Doctor.

Obituary.

FRANCESCO MAGNI.

THE greatest Italian ophthalmologist since Vacca died at San Remo on the 2nd inst.

Francesco Magni was born at Spedaletto, in the Province of Pistoia, Tuscany, in July, 1828. Having completed his secondary curriculum in the Pistoiese Liceo Forteguerri, he devoted himself to the study of medicine in the University of Pisa, where he won the respect of his teachers and the affection of his fellow-students by his sedulous application and his genial vivacity. Like most of the generous Italian youth of his time, the upheaval of 1848-49 drew him into the vortex of the revolution, and he abandoned the bedside and the laboratory to assist in the patriotic campaign. He was no less ardent and effective as a soldier than as a student, and, in particular, at the stubborn fight of Curtatone, where he was wounded, he earned the honourable mention of his commanding officer. The war over, he proceeded to Florence, and at the Hospital of Santa Maria Nuova he steadily and rapidly made up the arrears of study and observation incurred by his service in the field. From Florence he started on a professional tour, and visited in succession, each time for a considerable period, the principal cliniques of Germany, France, and England. Ophthalmic surgery was his favourite branch of medicine, and the opportunities he enjoyed, particularly under von Graefe, were not thrown away upon him. On his return to Florence, where he graduated, he filled the post of director of the Anatomical School until 1859, and in the following year he was transferred to Bologna to occupy the chair of Oftalmoiatria, and to conduct the clinique attached to it. Having acquired a sound and solid reputation in the ophthalmic specialty, he proceeded to America, and in the chief cities of the northern States he enhanced his already distinguished name for the centripetal exactness of his diagnoses and the brilliant success of his operations. Fortune as well as fame attended him in his subsequent career, his increasing lucrative clientèle necessitating periodical visits to the chief cities of the Italian peninsula. With all this occupation he found time to enrich the literature of his subject with contributions to the leading medical journals, in which the student will find it worth while to refer to the following papers:—"Lezioni di Oftalmoiatria" (*Rivista Clinica*, 1861-67); "Sarcoma sulla Cornea" (*Ebdomadario Clinico*, 1861); "Lezioni teoriche di Oftalmoiatria" (Bologna, 1867); "Descrizione della Cassula di Tenone" (1868); Contribuzione alla Anatomia Patologica dello Strabismo" (1868); "Sopra alcune Anomalie di forma nella Lente dell' Occhio umano" (1868); "Contribuzione allo Studio del Glaucoma" (1871); "Sugli Effetti del Processo flogistico della Coroide" (1872) "Il Processo flogistico considerato in alcuni Tessuti dell' Organo visivo" (1877); and an able treatise on University Reform addressed to Coppino, Minister of Public Instruction (1878).

Besides being an effective clinical prelector and brilliant operator, Dr. Magni took an energetic part in politics. He was elevated to the dignity of Senator of the Kingdom in 1876, and proved of the greatest service to successive Ministries, particularly in the field of public health and State medicine. He was a consistent but independent adherent of the Italian Left, and (what in Italy means devotion to the same school of politics) an ardent Freemason. His death, which was sudden, was due to asystole, of which he had lately had many premonitory symptoms.

VINCENT AMBLER, F.F.P.S.G.

THIS gentleman, who for many years past has been known as a West-end London practitioner, died suddenly in his bed on Sunday last, Feb. 6th, at his residence, No. 14, Colville-square. He commenced his medical career in the Crimea during the war, being then a student of medicine, and received the Order of Medjidie, 2nd class, as well as English and Turkish war medals. He qualified for medicine in 1866, and became F.F.P.S., L.S.A., and L.M. He had considerable practice amongst some of the foreign legations resident in London, was appointed Physician in Ordinary to the Japanese Legation and to the Persian Embassy, and was decorated with the G.K.C. of the Ancient Order of Lion and Sun, conferred on him by the Shah of Persia. A man of artistic tastes and accomplishments, of energetic nature, and of kind, hospitable disposition, he enjoyed the society of a wide circle of friends and acquaintances. His fatal illness commenced between two and three years ago, and was marked by severe attacks of spasmodic apnœa, for which he consulted Dr. B. W. Richardson, who diagnosed thoracic aneurysm, and who obtained a sphygmographic aneurysmal tracing at a pulsating point to the right of the sternum on the level of the nipple. Quite aware of his danger, Mr. Ambler nevertheless persisted in following out his professional work, and for many months past seemed to improve, the pulsation having ceased, and being succeeded by dulness and other signs of filling of the aneurysmal sac by fibrinous deposition. He remained at work, attending regularly to his duties, public and private, until Jan. 21st, when there was a return of the spasmodic apnœa, which passed away under rest and suitable remedies. He recommenced work in two or three days, did a fair amount on Saturday, and awoke on Sunday morning in his usual state, partook of a light breakfast in bed, and, lying down again to sleep, expired while still sleeping. His remains were interred in Kensal Green Cemetery on Wednesday last.

Medical News.

BRITISH AND INDIAN MEDICAL SERVICES.—The following Surgeons on probation in the Medical Departments of the British and Indian Armies were successful at both the London and Netley examinations held on Feb. 7th. The prizes are awarded for marks gained in the special subjects taught at the Army Medical School. The final positions of these gentlemen are determined by the marks gained in London added to those gained at Netley, and the combined numbers are accordingly shown in the lists which follow:—

BRITISH MEDICAL SERVICE.

	Combined Marks.		Combined Marks
Morgan, F. J.	5785	Salmon, L. B. A.	4552
*Horrocks, W. H.	5783	Wade, G. A.	4519
Hale, C. H.	5657	Minnisce, J.	4489
Thurston, H. C.	5476	Penton, R. H.	4475
Scott, B. H.	5316	Holt, M. P.	4442
Poole, W. C.	5261	Gray, W. L.	4390
Julian, O. R. A.	5058	Browne, E. G.	4341
Raymond, G.	5056	Morgan, J. C.	4262
Burnside, E. A.	5032	Pocock, H. J.	4247
McCulloch, T. C.	5020	Hilliard, G.	4230
†Hinde, A. B.	4951	Elliott, C. R.	4193
Reily, A. Y.	4886	Young, C. A.	4179
Cockerill, J. W.	4851	Bullen, J. W.	4150
Ritchie, J.	4798	Weir, C. J.	4140
Hore, H. St. G.	4795	Innis, B. J.	4124
Macdonald, S.	4741	Thacker, R. C.	4112
Corcoran, E.	4679	Murphy, W. N.	4109
Watson, A. C.	4628	Clark, S. F.	4073
Gray, E. W.	4621	Hassard, E. M.	4039
Stiell, D.	4605		

* Gained the Herbert Prize of £20, the Montefiore Medal and Prize of 20 guineas, and also the Martin Memorial Gold Medal.
† Gained the Parkes Memorial Bronze Medal.

INDIAN MEDICAL SERVICE.

	Combined Marks.		Combined Marks.
*Macnamara, R. J.	5936	Dyson, T. R....	4814
†Pilgrim, H. W.	5741	Hare, E. C.	4636
French, G. B.	5449	Clarkson, F. C.	4573
Thomson, P. W....	5372	Jordan, J. G.	4547
Brown, E. H.	5312	Swinburne, J. D. M.... ...	4533
Bensley, C. N.	5114	Morris, H. M.	4467
Henderson, S. H.	5072	Russell, A. R. P.	4441
Hall, G. C.	5063	Morwood, J.	4359
Grayfoot, B. B.	4949	Maidment, F. G.	4275
Scotland, D. W....	4939	Hall, E. A. W.	4108
Green, C. R. M....	4923	Blancard, J. T.	4088
Castor, R. H.	4835	Doyle, J. P.	3947
Sellick, J. H.	4819		

* Gained the Prize in Pathology, presented by Professor Wm. Aitken, F.R.S.
† Gained the Montefiore Second Prize.

THE annual ball in aid of the funds of the Newark Hospital took place on the 3rd inst.

THE death of Mr. Arthur Woolnough of Carlisle, from an overdose of chloral, occurred on the 31st ult.

THE twenty-seventh annual dinner of the old students of King's College was held on the 4th instant.

DONATION.—A. W. Shaw, J.P., has given £50 to Barrington's Hospital, Limerick.

H.R.H. THE DUKE OF CAMBRIDGE will preside at a public dinner on April 19th in aid of the funds of the Ventnor Consumption Hospital.

A DEATH from hydrophobia occurred on the 4th inst. in the Nottingham General Hospital. Muzzling regulations for dogs are in force in Nottingham.

LORD WOLVERTON has contributed £1000 to Morley House (Hospital Saturday Convalescent Home) upon condition that a four-bedded room, to be called the "Wolverton Room," shall be set apart for London postmen.

THE second annual general meeting in connexion with the Newbury District Hospital was held on Jan. 25th, when satisfactory financial and medical reports were presented.

GUY'S HOSPITAL.—A sum of £5730 has been collected among the members of the Stock Exchange in aid of Guy's Hospital, and has been sent towards the special fund of the hospital started at the Mansion House.

AT the annual meeting of the subscribers to the Ashburton and Buckfastleigh Cottage Hospital, on Jan. 28th, it was resolved that the work of erecting a new building be proceeded with forthwith.

AT the recent annual meeting of the collectors and subscribers of the Metropolitan Hospital Saturday Fund, it was reported that the committee had divided among the participating institutions £9750, or £250 more than in any former year.

PRESENTATION.—Mr. Isidore Prager, on his resignation of the post of house-surgeon to the National Dental Hospital, has recently been presented with a silver hot-water apparatus for surgery use by the staff and students of that institution.

AT a farm at Chignal, Essex, thirty-nine animals have, within the past few days, died of anthrax, and seventeen have been slaughtered; in all, fifty-nine out of sixty-two head of cattle have been lost. Every precaution has been taken to prevent the spread of the disease.

MEDICAL MAGISTRATES.—Edward England Phillips, L.R.C.P.E., M.R.C.S., L.S.A., medical officer of health to the Southend Urban and Rochford Rural Sanitary Authorities, and George Davidson Deeping, L.R.C.P. Lond., M.R.C.S., L.S.A., have been placed on the Commission of the Peace for the county of Essex.

ROYAL UNITED HOSPITAL, BATH.—The annual meeting of the supporters of this institution was held on the 24th ult. The report, which was read by the secretary, showed the receipts for the past year to have been £5676, an increase of £1328 as compared with 1885; while the legacies showed a decrease of £218, being only £649. The expenditure, amounting to £6026, exhibited an increase of £449.

THE fourth annual dinner of the members of the Association of Public Sanitary Inspectors was held on the 5th inst., Mr. Edwin Chadwick, C.B., the president of the Association, occupying the chair.

A PRIZE of fifty thousand francs is offered by the French Minister of Education for a discovery rendering electricity economically applicable in the shape of heat, light, chemical action, mechanical power, transmission of messages, or treatment of disease. A committee, with M. Bertrand, of the Academy of Sciences, as chairman, will adjudicate.

BRADFORD CHILDREN'S HOSPITAL.—At the annual general meeting of subscribers to this institution on the 28th ult., the secretary reported that the receipts amounted during the year to £552, and the expenditure to £526. The fund which was raised for the extension of the hospital amounts to over £4600, and the committee are in search of a building suitable for the purpose.

ROYAL UNIVERSITY OF IRELAND.—At a recent meeting of the Senate, the following additional Examiners in the Faculty of Medicine for 1887 were appointed:—Medicine: Stephen M'Swiney. Midwifery: John A. Byrne and H. M. Jones. Medical Jurisprudence: E. W. Davy and M. M'Hugh. Materia Medica: F. J. Quinlan and J. S. Reid.

HOSPITALS ASSOCIATION.—At the third general meeting of this Association, to be held at the Outer Temple (Room 44), 225, Strand, on Wednesday, Feb. 16th, at 8 P.M., a paper will be read by Miss E. G. Mansion, entitled "Is it desirable for Metropolitan Hospitals to possess Nursing Institutions, and to supply Nurses for Private Cases outside the Hospital walls?"

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The library of the College will be closed on Saturday, Monday, and Tuesday, the 12th, 14th, and 15th inst. for the purposes of the Hunterian Oration and Festival.—Professor W. H. H. Jessop, F.R.C.S., will deliver a course of three lectures on "The Intra-ocular Muscles," on Wednesday, Friday, and Monday, February 16th, 18th, and 21st, at 4 P.M. precisely each day.

SERIOUS EPIDEMIC OF MEASLES.—News has been received in Paris of an outbreak of a peculiarly virulent form of measles among the inhabitants of Saint Pierre and Miquelon, a couple of islands about ninety square miles in extent, situated off the Newfoundland coast. One thousand children out of a total population of 5700 are affected, and several deaths occur daily, either from the immediate effects of the disease or from secondary complications.

DURHAM COUNTY HOSPITAL.—The annual meeting of the governors and subscribers to this institution was held on the 1st inst., when it was reported that during the past year there had been 419 in- and 1513 out-patients, a decrease of 52 in-patients and an increase of 270 out-patients as compared with the preceding year. The income for the year was £2286, and the expenditure amounted to £3590, the latter amount including a balance of £1229 brought forward from the year before.

ROYAL FREE HOSPITAL.—The fifty-ninth annual meeting of the governors of this institution was held on the 3rd inst., under the presidency of Mr. James Hopgood. The receipts from all sources have, the secretary reported, amounted to £20,083, and the total ordinary expenditure to £11,121, as compared with £11,085 in 1885. The number of in-patients admitted was 1813, the daily average in the wards being 138, as against 125 in 1885. The number of out-patients who received advice and medicine was 22,191.

MEDICAL ATTENDANCE ORGANISATION COMMITTEE.—At the fourth meeting of the above committee on Feb. 8th, Sir T. Spencer Wells in the chair, the following resolution was passed: "That local committees are recommended to obtain from applicants for membership a declaration that, in the case of a single person or man and wife, their average earnings do not exceed 30s. per week; or of a family, 40s. per week; or of domestic servants, £15 per annum: those whose earnings are over this amount being, as a rule, ineligible for membership." The next meeting of the committee will be held on the 22nd inst., when they will proceed to consider the rates of contribution and benefits.

CITY OF LONDON TRUSS SOCIETY.—Under the presidency of Mr. J. Norbury, the seventy-ninth annual meeting of the governors of this charity, the object of which is indicated by its name, was held on the 2nd inst. From the annual report, which was read and adopted, it appears that the gross income during the past year amounted to £4189, as against £4062 in 1885. The total expenditure was £4926. During 1886, 9394 patients of all ages and both sexes were relieved, being the largest number ever relieved in one year since the foundation of the charity. The total number relieved to the end of last December since 1807 amounts to 422,710 patients. The number of instruments supplied during the year was 9436. Permission was afterwards obtained to sell out the funded property of the charity to the amount of £1250, in order to pay off a loan and to meet its growing requirements.

THE JUBILEE.—At a meeting of the Blackpool Town Council on the 1st inst., it was resolved that a public hospital and dispensary should be erected in commemoration of Her Majesty's Jubilee. A sum of £9000 is, it is stated, already available for endowment purposes.—On the 3rd inst., at Folkestone, it was decided to erect a large hospital in celebration of the same event, and several large contributions have been promised.—At a public meeting at Mexborough, on the 1st inst., it was resolved that a Jubilee Cottage Hospital be erected in the town.—The inhabitants of Skipton, Yorkshire, have decided to celebrate the Queen's Jubilee by erecting a Hospital for Infectious Diseases, at a cost of £3000.—In view of the Queen's Jubilee a commemorative dinner of the friends and supporters of the Dental Hospital of London will be held at the Hotel Métropole on Thursday, March 10th, under the presidency of Sir James Paget, Bart., F.R.S.—At the annual meeting of the friends and supporters of the Queen's Hospital, Birmingham, on the 7th inst., it was resolved that an effort be made to raise a Jubilee fund of £10,000, one half to be spent in improving the building, and the other half to be kept in hand so as to avoid financial embarrassments in the future.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BRIGGS, HENRY, M.B., C.M.Ed., F.R.C.S.E., has been reappointed Honorary Medical Officer to the Hospital for Women, Shaw-street, Liverpool.

BRODIE, F. CARDEW, M.R.C.S., L.R.C.P., L.S.A., has been appointed House-Physician to the Middlesex Hospital.

BURTON, JOHN HARP, L.R.C.P.Lond., M.R.C.S., has been reappointed Surgeon to the Hospital for Women, Shaw-street, Liverpool.

CARTER, T. E., M.B.Lond., M.R.C.S., has been appointed Surgeon to the Stamford and Rutland Infirmary.

CHAMPNEYS, FRANCIS HENRY, M.A., M.B.Oxon., F.R.C.P.Lond., has been appointed Consulting Physician to the General Lying-in Hospital, York-road, Lambeth.

COSGRAVE, R. MACDOWEL, M.D., M.K.Q.C.P.I., has been appointed Physician to the Heytesbury Industrial School, Dublin, vice Walter Smith, M.D., resigned.

EDIS, J. BUTLER, L.R.C.P. Ed., M.R.C.S., has been reappointed Honorary Assistant Medical Officer to the Hospital for Women, Shaw-street, Liverpool.

JORDAN, FURNEAUX, F.R.C.S.E., has been appointed Consulting Surgeon to the Queen's Hospital, Birmingham.

PHILLIPS, EDWARD ENGLAND, L.R.C.P.Ed., M.R.C.S., L.S.A., has been re-elected Medical Officer of Health for the Southend-on-Sea Urban Sanitary Authority, Essex.

POLLARD, REGINALD, M.B.Dur., M.R.C.S., has been elected Physician to the Western Hospital, Torquay, vice Nankivill, resigned.

RAMSAY, R. HAMILTON, M.D., C.M.Glas., has been elected Physician to the Western Hospital, Torquay, vice Hounsell, deceased.

ROBERTS, THOMAS A., L.D.S., has been appointed Honorary Dental Surgeon to the Pimlico-road Free Dispensary, vice G. W. Payne, L.D.S., retired.

SHORT, THOMAS SYDNEY, M.B., M.R.C.S., L.S.A. Cert. San. Sci. Camb., has been appointed Resident Medical Officer to the Jaffray Hospital, near Birmingham.

SPENCE, J. B., M.A., M.B., Assistant-Physician, Royal Edinburgh Asylum, has been appointed Medical Superintendent of the Ceylon Asylum.

STEELE, CHARLES E., M.R.C.S., L.S.A., has been reappointed Honorary Assistant Surgeon to the Hospital for Women, Shaw-street, Liverpool.

STEWART, JAMES, L.F.P. & S.Glas., &c., has been appointed Poor-law Medical Officer for the District of Rotherham, and also Public Vaccinator, vice D'Oyley Foote, M.D., M.R.C.S., L.M., deceased.

WHARRY, H. G. O., M.R.C.S., L.S.A., has been elected House-Surgeon and Secretary to the Scarborough Hospital and Dispensary, vice Kenneth Fraser, B.A., M.D. Dub. Univ.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BIRMINGHAM GENERAL HOSPITAL.—Two Assistant House-Surgeons. No salary, but residence, board and washing, will be provided.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, London, S.W.—Three Clinical Assistants. Salary £5 5s. for a period of three months.

GLAMORGANSHIRE AND MONMOUTH INFIRMARY AND DISPENSARY, Cardiff.—Ophthalmic Surgeon.

PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY.—Senior House-Surgeon. Salary £100 per annum, with lodging, washing, and board.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, London.—Junior House-Physician. Salary £25 for six months, with board and lodging.

ST. ASAPH UNION.—Medical Officer. Salary £83 per annum.

STAFFORDSHIRE GENERAL INFIRMARY, Stafford.—Honorary Visiting Physician.

WEST HERTS INFIRMARY, Hemel Hempstead.—House-Surgeon and Dispenser, to also act as Assistant-Secretary. Salary £100 per annum, with board, furnished rooms, fire, lights, and attendance.

Births, Marriages, and Deaths.

BIRTHS.

COWARD.—On the 29th ult., at Burdett-road, Limehouse, the wife of Christopher T. Coward, L.F.P.S.Glas., L.S.A., of a daughter.

CROSSFIELD.—On the 1st inst., at Broadstone House, Dartmouth, the wife of A. Kyffin Crossfield, L.R.C.P.Ed., L.R.C.S., of a son.

SHERWOOD.—On the 2nd inst., at Eastbourne, the wife of Arthur P. Sherwood, L.R.C.P., of twins (daughter and son).

SKINNER.—On the 16th ult., at Daghai, Punjab, the wife of Surgeon Bruce M. Skinner, L.R.C.P.Ed., M.R.C.S., Army Medical Staff, of a son.

SMITH.—On the 6th inst., at Kensington-gardens-square, the wife of E. Stanley Smith, L.R.C.P.Ed., M.R.C.S., of a daughter.

WYLIE.—On the 30th ult., at Dyneley House, Skipton, the wife of William Wylie, M.D., of a son.

MARRIAGES.

CAUDLE—BARTON.—On the 3rd inst., at St. John's Church, Calcutta, Charles R. Caudle, M.D., to Agnes, second daughter of the late Rev. R. G. Barton, late Rector of Etchingham, and of Urmston, Eastbourne.

DOUTY—CAZALET.—On the 29th ult., at the Parish Church, Leigh, near Worcester, by the Right Rev. the Lord Bishop of Worcester, uncle of the bride, assisted by the Rev. B. H. Sheppard, Rector, and by the Rev. W. G. Cazalet, brother of the bride, J. Harrington Douty, M.R.C.S.Eng., &c., Medical Superintendent (elect) of the Berks County Asylum, Moulsford, to Madeline, only daughter of Major G. H. Cazalet, of Bransford Court, Worcestershire, late of the 1st Royal Surrey Militia.

DOYLE—STEELE.—On the 3rd inst., at St. Luke's Chapel, Norwich Cathedral, Charles William Doyle, M.B., to Emma, daughter of the late Adam Rivers Steele, Barrister-at-law.

HALFORD—HOSE.—On the 2nd inst., at the Parish Church, Ealing, Edward Halford, M.D., to Latitia Thomasine, third daughter of the late Rev. Fredk. Hose, M.A., Rector of Dunstable, Beds.

O'CONNOR—RICHARDSON.—On the 5th inst., at the Parish Church, Chatteris, Cambs., Martin O'Connor, L.K.Q.C.P.I., L.R.C.S.I., to Julia Temperance, only surviving daughter of the late Fryer Richardson, Esq., of Fortrey House, Chatteris.

ROWLEY—FORDE.—On Dec. 21st, 1886, at St. Peter's-in-the-Forest, Bombay Settlement, Great South-road, Auckland, New Zealand, by the Rev. E. J. Macfarland, B.A., Charles Rowley, M.R.C.S.Eng., of Bombay, eldest son of Charles Octavius Rowley, M.R.C.S.Eng., of Barnsley, to Lilian Louisa, second daughter of the late Frederick Forde, J.P., of Bombay Settlement.

DEATHS.

FOOTE.—On the 3rd inst., at Croft's House, Rotherham, Yorks, Harry D'Oyley Foote, M.D., M.R.C.S.E., L.M., in the fifty-third year of his age. Friends will please accept this the only intimation.

GASKOIN.—On the 5th inst., at The Priory, Caerleon, Mon., George Gaskoin, M.R.C.S., late of Westbourne-park, London, aged 70.

HOWARD.—On the 6th inst., at New Buckenham, Norfolk (of diphtheria), Herbert Howard, M.R.C.S., L.R.C.P.Lond., in his 30th year.

MATHESON.—On the 5th inst., at his residence, Granville-place, Portman-square, Duncan Matheson, L.R.C.P.Ed., L.F.P.S.Glas.

SMITH.—On the 27th ult., at Portland House, Cheltenham, Thomas Smith, M.D., M.R.C.P.L., aged 74.

UNDERHILL.—On the 1st inst., Emily Margaretta, the beloved wife of William Lees Underhill, Surgeon, of Tipton.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

BOOKS ETC. RECEIVED.

ALLEN, E. W., Paternoster-row, London.
Electricity in the Treatment of Disease. By Jas. R. Tumner, M.R.C.S. pp, 108.

CASSELL & Co., London, Paris, New York, & Melbourne.
The Year-book of Treatment for 1886. pp. 304.

CHURCHILL, J. & A., New Burlington-street, London.
On Aphasia; being a Contribution to the Subject of the Dissolution of Speech from Cerebral Disease. By James Ross, M.D., LL.D.Aber. pp. 128, Illustrated.
Year-book of Pharmacy, 1886. With the Transactions of the British Pharmaceutical Conference held in Birmingham. pp. 672.
Prelectiones Anatomiæ Universalis. By William Harvey. Edited, with an autotype reproduction of the Original, by a Committee of the Royal College of Physicians. pp. 98, quarto. 52s.-6d.

DEIGHTON, BELL & Co., Cambridge; G. BELL & SONS, London.
The Croonian Lectures on Some Points in the Pathology of Rheumatism, Gout, and Diabetes. By P. W. Latham, M.A., M.D. &c. pp. 123.

DULAU & Co., London. BRAUMULLER, Vienna. VAIL & Co., New York.
Anatomy, Descriptive and Topographical. By Carl Heitzmann, M.D. English Edition by Louis Heitzmann, M.D. pp. 806, with 625 Illustrations.

GRIFFIN, C., & Co., Exeter-street, Strand, London.
The Surgeon's Pocket-book. By Surgeon-Major J. H. Porter. Third Edition. Revised and Edited by Brigade-Surgeon C. H. Y. Godwin. pp. 257, with Illustrations.

HIRSCHWALD, A., Berlin.
Studien über Stoffwechsel im Thierkörper. Gesammelte Abhandlungen von. Prof. Dr. J. Seegen. S. 660, mit 2 litho. Tafeln.
Die Chirurgisches Behandlung des Kropfes. Von Anton Wölfler. S. 90.

LEWIS, H. K., Gower-street, London.
A Text-book of Medicine. By Dr. Adolf Strümpell. Translated by permission from the Second and Third German Editions by Dr. H. F. Vickery and Dr. P. C. Knapp. With Editorial Notes by Dr. F. C. Shattuck. pp. 981, with 111 Illustrations.
Outlines of the Pathology and Treatment of Syphilis, &c. By H. v. Zeissl, M.D. Second Edition, Revised by M. v. Zeissl, M.D. Authorised Edition, Translated with Notes, by H. Raphael, M.D. pp. 402.
What to do in cases of Poisoning. By Wm. Murrell, M.D., F.R.C.P. Fifth Edition. pp. 220.
Massage as a Mode of Treatment. By Wm. Murrell, M.D., F.R.C.P. Second Edition. pp. 100.

LONGMANS, GREEN, & Co., Paternoster-row, London.
Anatomy, Descriptive and Surgical. By Henry Gray, F.R.S. Eleventh Edition. Edited by T. Pickering Pick. pp. 978, profusely Illustrated. 36s.

NISBET, J. & Co., Berners-street, London.
Forbidden Fruit for Young Men. By Major Seton Churchill. pp. 269. 2s. 6d.

OLIVER & BOYD, Edinburgh.
Sputum: its Microscopy and Diagnostic and Prognostic Significations. By Francis Troup, M.D. St. And., &c. pp. 263, with 36 Plates.

PENTLAND, YOUNG J., Edinburgh.
The Science and Art of Obstetrics. By Theophilus Parvin, M.D., LL.D. pp. 701, with 214 Woodcuts, and a Coloured Plate.
Practical Medicine and Medical Diagnosis. By Byrom Bramwell, M.D., F.R.S.E. pp. 149, with 41 Illustrations.

SMITH, ELDER & Co., Waterloo-place, London.
St. Bartholomew's Hospital Reports. Edited by W. S. Church, M.D., and John Langton, F.R.C.S. Vol. XXII. pp. 435—108.

SMITHSONIAN INSTITUTION, Washington, U.S.A.
Researches upon the Venoms of Poisonous Serpents. By S. Weir Mitchell, M.D., and E. T. Reichert, M.D. pp. 186, with five Coloured Plates.

THORP & GODFREY, Lansing, Michigan.
Thirteenth Annual Report of the Secretary of the State Board of Health of the State of Michigan for 1885. pp. 294.

WILLIAMS & NORGATE, Henrietta-street, Covent-garden, London.
The Factors of Organic Evolution. By Herbert Spencer. pp. 76.

On Antiseptic Surgery; by Surgeon-Major J. Martin (Churchills).—Journal Akusherstva i zhenskikh Boleznei, Tom. 1, No. 1 (Russian Journal of Obstetrics and Gynæcology).—Index Medicus, Vol. VIII., No. 12.—Lists of Publications and of Foreign Correspondents in connexion with the Smithsonian Institution, Washington, U.S.A.—La Circulation des Forces dans les Etres Animés; par le Dr. L. Natanson.—Par le Dr. Jules Félix: Etude sur les Hôpitaux et les Maternités; De l'Assainissement des Villes et des Habitations; La Question des Hôpitaux; Etude Clinique la Fistule à l'Anus; Tumeur Carcinomateuse du Sein; Des Avantages du Pansement Métallique.—Causation and Treatment of Congenital Club-foot; by Frederick Churchill, M.B., F.R.C.S.—A Raiva; por Eduardo Abreu (Lisboa).—Magazines for February:—Good Words, Sunday Magazine, Leisure Hour, Sunday at Home, Boys' Own Paper, Girls' Own Paper.

Medical Diary for the ensuing Week.

Monday, February 14.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesdays, same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.
SOCIETY OF ARTS.—8 P.M. Mr. W. Y. Dent: Building Materials (Cantor Lecture).
MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Leopold Servais of Antwerp will read a report on Two cases of Enormous Tumours of the Face, treated by Removal of both Superior Maxillæ.

Tuesday, February 15.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 and Thursdays at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 1.30 P.M. Skin Department. Mondays and Thursdays, 9.30 A.M.
ROYAL INSTITUTION OF GREAT BRITAIN.—3 P.M. Prof. Arthur Gamgee: The Function of Respiration.
SOCIETY OF ARTS.—8 P.M. Mr. Allan Ransome: Some of Our Colonial Woods.
PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Hale White: On the falling out of Teeth in Tabes Dorsalis.—Mr. D'Arcy Power: Intermuscular Synovial Cysts.—Dr. Hyla Greves: Endothelioma of Dura Mater.—Dr. Semon (for Dr. Jacob): Syphilitic Hyperplastic Laryngitis.—Dr. Hadden: Mitral Aneurysm in a Child.—Mr. Shattock: Ectopia Vesicæ.—Mr. Clutton: Retro-pharyngeal Abscess.—Mr. Gould: Horny Growth on Penis.—Mr. Godlee: Adeno-sarcoma of Tongue with Calcifying Nodule in Centre. Card Specimens:—Dr. Hadden: Perforation of Large Intestine in Enteric Fever.—Mr. Fenwick: Renal Carcinoma.—Dr. Mott: Myxo-fibroma compressing the Spinal Cord.—Mr. Clutton: Congenital Abnormality of Lower Lip with Cleft Palate.

Wednesday, February 16.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesdays and Thursdays, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; and on Friday, 2 P.M.; and Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.
SOCIETY OF ARTS.—8 P.M. Mr. Henry H. Cunynghame: Uses, Objects, and Methods of Technical Education in Elementary Schools.

Thursday, February 17.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Surgical Consultations, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ROYAL INSTITUTION OF GREAT BRITAIN.—3 P.M. Prof. A. W. Rücker: Molecular Forces.
PARKES MUSEUM OF HYGIENE.—5 P.M. Mr. Charles E. Cassal: Food Adulteration and Analysis.
HARVEIAN SOCIETY OF LONDON.—8.30 P.M. Mr. Sedgwick: Notes on the Collapse of Cholera.—Dr. Sidney Phillips: Some points in the Treatment of Fever.—Dr. A. H. N. Lewers: The best means of Dilating the Cervix Uteri.

Friday, February 18.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1.30 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
SOCIETY OF MEDICAL OFFICERS OF HEALTH.—7.30 P.M. Mr. C. E. Paget: A Practical Illustration of the Protective Influence of Vaccination.
ROYAL INSTITUTION OF GREAT BRITAIN.—9 P.M. Mr. William Crookes: Genesis of Elements.

Saturday, February 19.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION OF GREAT BRITAIN.—3 P.M. Mr. Carl Armbruster: Modern Composers of Classical Song—Jensen, Lassen, Holstein, Berlioz, and Wagner (with Vocal Illustrations).

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, February 10th, 1887.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Feb. 4	30·34	W.	53	51	...	54	50	...	Overcast
,, 5	30·39	W.	47	45	...	55	45	...	Fine
,, 6	30·71	E.	40	38	...	45	37	...	Hazy
,, 7	30·75	S.E.	36	35	...	43	34	...	Foggy
,, 8	30·74	E.	32	32	...	42	30	...	Hazy
,, 9	30·71	E.	35	32	...	38	31	...	Overcast
,, 10	30·55	N.E.	31	Frost.	...	37	30	...	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

SHOULD MEDICAL AID FRIENDLY SOCIETIES NOT BE SUPERVISED BY THE MEDICAL COUNCIL?

Philalethes, in a letter too long for insertion, draws a terrible picture of the evils likely to result if no legal check is put to the tendency of friendly societies to combine and exact heavy and responsible duties from medical men on grievously low terms. He thinks the Medical Council might supervise such societies in regard to their medical affairs, and see that they select proper officers and pay them properly. We lament with him the evils of the existing system, and we urge all medical men to decline those appointments; but we are of opinion that the profession must in this matter protect itself. The Legislature is too helpless just now, even if it had the wish, to do any such useful work as regulating the medical service of the friendly societies.

Ambulances.—Probably Furley's horse ambulance carriage would be found suitable. Our correspondent would do well to communicate with Mr. Furley on the subject.

Mr. Shelswell.—The paper is marked for early insertion.

WARMING OF RAILWAY CARRIAGES.

To the Editors of THE LANCET.

SIRS,—On reading last week's issue of THE LANCET I noticed an article on the above important subject, both as regards the health and comfort of railway passengers. It may not be known to very many, if to any, of the readers of THE LANCET that an apparatus for the warming of railway carriages has been invented and patented by Mr. Foulis, the engineer to the Glasgow Corporation Gasworks, and that experiments have taken place with it on the Glasgow and South-Western Railway which have proved it to be a great success. The following is an account of the apparatus which I have taken from the *Railway Review* of Jan. 21st.

"The heat is obtained from the gas-lamp in the roof of the carriage. At the top of each lamp there is a small water-heater, and from this the hot water descends by means of two small pipes about a quarter of an inch in diameter, encased in the panelling of each compartment. The pipes pass into heaters placed beneath the seats in the carriage, and these are so arranged that the air entering at the bottom of the heater, where it is coldest, passes up and leaves the heater at the top, where it is hottest, discharging a constant glow of hot air into the carriage. The heaters have fan-shaped mouths, so that there is no intermittency in the supply. Only one carraige has been fitted with the apparatus, but this has proved successful beyond anticipation. If this apparatus becomes general, railway passengers will have to thank Mr. Foulis for one of the greatest boons conferred upon them." I am, Sirs, yours truly,

Wednesbury, Feb. 8th, 1887. HENRY E. BLACKWOOD.

DRUNKENNESS IN BELGIUM

ACCORDING to statistics, Belgium is the most drunken country in Europe Where in 1850 there were 53,000 public-houses, there are now 195,000—that is to say, one for every 44 of the population. The Government is, however, taking steps to repress and prevent drunkenness. Should the Bills be carried, publicans who supply drink to persons obviously drunk, or to anyone under sixteen years of age, will be liable to a fine not exceeding £1 for the first offence, while if they cause a minor to drink to intoxication they may be fined £4. Whoever is responsible for serious illness resulting from intoxication may be fined from £2 to £80, with from a week to two years' imprisonment, according to the gravity of the case. Should death ensue, a fine varying from £10 to £200, and from five to ten years' imprisonment, may be imposed. Public-house debts are no longer to be recoverable.

Mr. Wm. Lake.—We have no knowledge of the "remedy" or of the person who advertises it.

K. K. might write to the bankers of the Fund, Messrs. Coutts, Strand.

SEA-SICKNESS.

To the Editors of THE LANCET.

SIRS,—Having had occasion last week to escort a patient to the Continent, I had two rough journeys across the Channel to encounter. Most of my fellow-passengers paid a tribute to the power of Father Neptune. I escaped by a method which I should like to discuss, if you think it worth your space, which is so valuable.

I take it that all are agreed that in some way the nervous system is the primary cause of sea-sickness. I have heard it argued that this distressing malady is the consequence of variations in the pressure at different parts of the cerebro-spinal fluid, consequent on the varying position of the ship. My own notion is that a sort of vacuum is created in the abdominal cavity. Suppose, for instance, the ship is descending into the trough of a sea, the lower limbs feel the effect of the descent before the upper. The contents of the abdominal cavity are likewise drawn downwards, the uppermost contents being the last to feel the effect. Suppose at the same moment an expiration takes place, the diaphragm is at its highest. Under ordinary circumstances the viscera would be steadily pressed by the abdominal muscles, but in this case the diaphragm rises at the moment that the intestines tend to fall. The result is a momentary removal of pressure from the solar plexus and splanchnic nerves, followed by an unusual pressure. The result must be excessive action, followed by complete arrest of action. All rhythm must be lost before long under such circumstances. The result must be, it seems to me, that wild, inhibitory messages are sent to the heart, amongst other organs, resulting in the pallor which precedes each access of sickness. The directions to the various organs are equally excessive or equally wanting. At one moment saliva, bile, and other secretions are set flowing with extraordinary vigour; at the next arrested. The peristaltic action of the intestines becomes confused, and at times reversed, and the bile finds its way into the stomach. The action of the diaphragm becomes spasmodic, and sickness ensues. Assuming this theory to be correct, how does it throw light on the treatment? The method I adopted was this: Whenever the cockleshell in which I was travelling gave an extra roll I held my breath and contracted my abdominal muscles as much as I could. In this way I kept up a steady pressure on my solar plexus. When the boat travelled comparatively steadily for a moment or two, I breathed again. If for a moment I was off my guard and relaxed my abdominal muscles, that moment I felt that singular sinking sensation at the pit of the stomach which heralds *mal de mer*. Of course, this method is only applicable to short trips, such as that across the Channel. If the methods in vogue for treating sea-sickness be considered, it will be seen that many of them are explicable on my theory. When I was a ship's surgeon the plans most recommended by travellers were to administer bottled stout or champagne. In either case the gas evolved distends the stomach, and so keeps the pressure uniform. Another plan I have heard recommended is to eat pickled onions freely before going on board. Probably, in that case, too, indigestion produces evolution of gas, and so steady pressure. Could not an elastic belt be tried to help to keep up even pressure?

I am, Sirs, your obedient servant,

Southborough, February, 1887. B. PAGET THURSTAN, M.D.

"OBSTINATE CONSTIPATION IN AN INFANT."

To the Editors of THE LANCET.

SIRS,—In answer to your correspondent, "O. P. Q.," who sought in your issue of Jan. 29th suggestions on the treatment of the above, I would advise him to eschew the administration of purgative medicines and enemata. He should try massage—gentle kneading of the abdomen, and friction over the region and in the direction of the colon, by which means muscular action is stimulated and the desired result produced. The process should be repeated once or twice, at fixed times, daily, until regular action of the bowels results. Of course, the diet has to be attended to, and the feeding regulated as to time and quantity. The child should be given passive exercise in the fresh air daily. Other readers might also, I venture to hope, try, and pronounce their opinions upon, this plan of treating obstinate constipation.

I am, Sirs, yours very truly,

Ramsgate, Feb. 3rd, 1887. JOHN LUCAS, M.D.

PROVIDENT DISPENSARIES SUICIDAL TO THE PROFESSION.

To the Editors of THE LANCET.

SIRS,—Your correspondent, Dr. Dickinson, not long ago stated that the Wandsworth Medical Aid Society—and I take this one simply as a type of all the others—provides medicines and medical attendance, either at the patient's house or the doctor's surgery, for 5000 people for one year for £350. In my district they do the same. Besides, a host of letters are given away, so that almost anyone can attend a local hospital for nothing. Again, the London hospitals are within a cheap ride. And I quite agree with your correspondent that it is usual for half a dozen of the oldest practitioners in the district to allow their names to be placed on such a list. They really ought to be ashamed of it. Why do they do this? Because they want to keep all the patients on their own books; and they would attend the whole lot for nothing rather than let them go to a fresh man. These old practitioners have secured the best class of patients, and to prevent opposition they will attend the ragged lot for next to nothing. Under the cloak of charity it is a lever to try to starve a new man and give vent to their professional jealousy. How is a doctor to start a practice, and who are likely to be his first patients? These are the very people upon whom he depends; yet they are to be gathered into the old practitioner's net, and treated for an ignominious fee to prevent any other doctor having them on better terms. The people who pay these pence regularly are those who can very well afford to pay a shilling or two each time the doctor attends them. The other class will not subscribe. Then, the scale gives less than 4*s.* a year for each patient. Now, if a patient but went to the doctor, say, for a couple of bottles of physic, he would pay that amount. If it be necessary to have this sort of charity, let the public bear the burden of it, and not medical men. For every member who pays 4*s.* let the public add 6*s.*, so as to offer something like a fee to which a doctor is entitled. On what grounds is a doctor always to be a tool of charity? The poverty of the profession flourishes on the jealous suicidal policy of its members. They endeavour to grasp each other's patients by offering skill at a lower fee. Even then, not content, they play the *rôle* of cat's paw to the parson's monkey. Who gets the chestnuts? The public. Who gets the honour? The parson. Who does the work? The doctor. What other professional man works seven days and two nights a week? What other professional man has so poor an income and such ill-proportioned expenses? At this rate a doctor's income should be double a lawyer's. But it is not. There is talk of increasing the student's period of study by a year or so. What is he to have afterwards? The dignity attached to attending and supplying patients with physic for 4*s.* a year. Happy man! Your correspondents are usually well-to-do men, of position and ability, and who have sufficient from practice or otherwise to keep them. Therefore you rarely hear from my class, and rarely hear how the beneficent system takes the butter from the struggling doctor's bread. There is very little *esprit de corps* in general practice, and we wage a war of extermination against each other with kid gloves on. Those who support and encourage these clubs and charitable associations are working against the mass of doctors for the good of a few. As you undoubtedly support all forms of charity, I trust you will bestow a little of it, by inserting this in your journal, on

Yours faithfully,

Dec. 13th, 1886. A GRUMBLER.

S. P. J.—General Maxwell's treatise, entitled "The Beaufort Artificial Arms and Legs for the Crippled Poor," is printed for private distribution, and will be freely sent to all applicants who are interested in the charity. Requests for copies should be addressed to General H. H. Maxwell, C.B., R.A., Villa Gamberini, Via Palestro, Rome.

Enquirer.—The best inhaler for the administration of the A.C.E. mixture is the perforated leather cone, containing a sponge and lined with flannel. Several layers of lint may be used, and even Junker's apparatus in operations of the face and mouth.

U. V. is referred to announcements in our advertising columns.

AN IMPROVED TRICYCLE.

To the Editors of THE LANCET.

SIRS,—May I call your attention to a tricycle which I saw at the Stanley Show last Saturday, and which seems to me to be a great improvement on the ordinary kind of machine. Certainly it is so from a medical point of view. We have all noticed how the ordinary tricycle—and, for the matter of that, the bicycle as well—tends to round the shoulders and contract the chest. In the machine to which I wish to call your attention this evil is entirely removed. The action which propels this machine is precisely that of rowing. The rider sits upright, and literally rows himself along, and that at a first-rate speed. Instead of only a few groups of muscles being brought into play, all the muscles of the body are, as in rowing, at work. The advantages of the sliding seat are obtained by means of a moving stretcher, this movement itself aiding in the propulsion of the machine. Dr. Richardson has often written about the advantages of tricycle exercise. I wish he would try this new machine, as I feel sure he would endorse my views. The machine has been invented by Mr. J. Inglis Mitchell, C.E., and is being exhibited by Mr. A. Doman. It is called the "Jubilee" tricycle.

I remain, Sirs, yours faithfully,

Holloway-road, N., Feb. 1st, 1887. W. HENRY KESTEVEN.

THE VACANCY AT ST. BARTHOLOMEW'S.

THE name of Dr. W. E. Steavenson was placed amongst the list of candidates for the post of assistant-physician to this hospital in our last issue. This was a mistake, as Dr. Steavenson is in charge of the electrical department, and did not apply for the appointment.

Dr. R. W. Foss.—The paper was published in the tenth report of the Medical Officer of the Privy Council. We do not know whether the volume is out of print.

Mr. C. S. Jeaffreson.—As early as possible.

"THE GENERAL MEDICAL COUNCIL AND UNQUALIFIED ASSISTANTS."

To the Editors of THE LANCET.

SIRS,—Your correspondent, "Unqualified Assistant," asks, in your last issue, if "scores of hard-working and valuable unqualified assistants are to go to the workhouse" because the General Medical Council is proposing to abolish their further use, and mentions their "long and faithful" services to the profession, and concludes by suggesting that a special Register should be made for their peculiar benefit. This is simply the wildest nonsense that could be penned in support of an abuse that ought never to have been allowed. No such unqualified man can engage in practice without palming himself off as a "doctor," and as such he is, in plain words, deceiving the public, with the sanction of the greater offender, who knowingly employs him. Would the public receive an unqualified man if he went to them in his true colour? Certainly not. And why should they? The law has a test which the public generally expect medical men to comply with. So long as this abuse is tolerated by the General Medical Council it will only put a premium upon ignorance, and encourage the idle and lazy among *chronic students* who have neither the brains nor the perseverance to work for a qualification to become what is erroneously called an "unqualified assistant." It is not fair or just to the young qualified man, who has after hard work reached the required standard and gained his legal status, to be checkmated by a hybrid who is neither student nor qualified. At the present time, as matters stand, a man may graduate in the best university and become duly registered, and the only return he gets from the Medical Council is simply a copy of the Register containing his name and degree, &c., with no protection whatever against any poacher, no matter how unqualified he may be. There are in the kingdom very many entrances into the medical profession, and the highest standard required in the best of them is not too severe for an ordinary student who shows a desire to obtain the distinction. Ordinary men have obtained these distinctions, and can still obtain them if they only try in the proper way.

I am, Sirs, yours faithfully,

Feb. 7th, 1887. NUDA VERITAS.

An Old Assistant, in a communication on the above subject, writes:—"There are men on the Medical Register who have no diplomas and possess no legal qualification, but are registered for service. On the Medical Register for 1884 are about twenty such men. They are registered for services variously obtained—the army, navy, public service, and as surgeons, under the 46th Section of the Medical Act, 1858. If the 46th Section admitted these unqualified men on the Medical Register, why not make the same use of that Section and admit all old assistants of approved education and antecedents, and allow them to act as assistants, or, if possible, if their private means allow, to gradually improve their positions and become legally qualified? I am an old assistant myself, am now running on fast to the age of threescore years, have liked my vocation, and could have legally qualified nearly thirty years since; but forty years and more have gone since I became a probationer, previously to apprenticeship under the Act of 1815. In due time I completed my apprenticeship, and gained in the seven years and a half an insight into practice which has stood me in good stead. I was then a fair all-round practitioner. I tried to gain employment, but was told that if I 'legally qualified' I must 'be gone.' I was left a parentless youth with only a small patrimony. Still, I am a man of full curriculum, and of a university to boot. I considered, and made a resolution, upon which I have acted for forty years, that it was better to be a rich assistant than a poor principal; and in my case it has paid. I only held two assistancies in thirty-six years, was employed in first-class situations, loved my work and all its surroundings, obtained good salaries, worked hard, and merited my masters' approbation, keeping my bonds never to injure my masters or their families by proceeding to qualify and register. Such has succeeded well with me. In my sere time of life a place on the Register will avail nothing. I have lived a life free from disputes and tergiversation; but I have been spared the bitterness of non-success. I am in comfortable circumstances. My masters are both dead. I have stood a guardian's part to the last master's widow and family. I married at thirty years of age, or a little under that age, and have brought up a family of three daughters and one son. My son is a university undergraduate, who will soon obtain his degrees in medicine and surgery. The experience I have gained has been of great value in knowing how to handle the reins. I have given my children good education, and do not regret in one particle the plan I have followed. Had I my time over again I should follow out the same plan. I am fully aware that a man cannot do now as a medical assistant what was done twenty, thirty, or forty years ago. A more advanced curriculum is demanded, and an extended compulsory classical and mathematical examination is required. But are the medicos of the present day better men? I think not. If all circumstances are fairly balanced, I think the same standard of perfection would have been reached. The Medical Council ought to take a fair percentage of those who matriculate, and take an estimate of causes of failure to pass the finals, and in all fit and proper cases allow a man to work as an assistant under a legally qualified practitioner, or, if experienced and above a certain age, to be registered under the 46th Section of August 1st, 1858."

DROWSINESS ACCOMPANYING DYSPEPSIA.

To the Editors of THE LANCET.

SIRS,—I shall feel obliged if some of your numerous correspondents will give me their views as to the actual cause of the extreme drowsiness and torpor that one meets with in some cases of dyspepsia. Is it due to anæmia, or congestion of the brain, or to some poisonous product in the blood, the result of mal-assimilation? I am not speaking of that lesser degree of drowsiness which most people experience after a heavy meal, but a state of what one may call almost constant sleep, not confined to gross eaters or to those who lead sedentary lives. Some of these people will sleep all day, even after breakfast the desire for sleep being almost irresistible. Treatment in the way of drugs seems to be of little avail. Any information on the subject, as well as any treatment that has been found successful, will be very acceptable.

I am, Sirs, yours faithfully,

Jan. 20th, 1887. L.R.C.P. LOND., M.R.C.S.

Asclepiad.—The latest contribution to the literature of malaria in its nature and its etiology is the paper read at the Roman Academy of Medicine on Jan. 23rd, 1887, and published in the Transactions of that body.

Mr. H. Sergeant.—The alterations in the matriculation to which we referred were adopted at a meeting of the Senate on Dec. 22nd, 1886, but we cannot say how soon they will be embodied in the official regulations, or take effect.

Circocele.—All forms of medical treatment aim at securing obliteration of the affected veins, and we know of none which succeed without this.

Mr. H. Fenwick.—Yes.

G. P.—The question has been repeatedly answered.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Bland Sutton, London; Dr. Cullingworth, Manchester; Mr. M. Handfield Jones, London; Dr. C. West, London; Dr. Dowding; Mr. Fitzroy Benham, London; Dr. Cosgrave, Dublin; Dr. Goodhart; Dr. Murray Mackenzie; Dr. J. Williams, London; Dr. Macdonald, M.P., London; Dr. Stevenson, London; Dr. Ray Lankester, London; Dr. Percy Boulton, London; Mr. S. Snell, Sheffield; Mr. Noble Smith, London; Mr. J. Marshall, Dover; Mr. J. Clerk, Glasgow; Dr. Campbell Pope, London; Dr. C. H. Taylor, Hammersmith; Mr. Pink, London; Mr. H. Sergeant, London; Dr. E. P. Thurstan, Southborough; Mr. Barwell, London; Dr. J. B. Potter, London; Dr. Park, Glasgow; Mr. Clement Lucas, London; Mr. R. W. Murray, Manchester; Dr. A. G. Williams, Brixton; Mr. F. J. Smith, London; Mr. W. Luke, London; Mr. H. Simmons, London; Mr. E. M. Crookshank, London; Mr. A. Drysdale, Cannes; Dr. Foss, Stockton-on-Tees; Dr. Lucas, Ramsgate; Mr. S. W. North, York; Dr. Oliver, Newcastle-on-Tyne; Surgeon-Major Doble, Kamptu; Mr. E. C. Arnold, Vienna; Dr. Lindsay, Belfast; Mr. E. E. Phillips, Southend; Mr. Leeming, Kendal; Mr. Finley; Dr. Beavan Rake, Trinidad; Mr. Whyte, London; Mr. Woodd; Messrs. Kuhner and Co., London; Mr. Storey, Stroud; Mr. Yeatman, Auburn, South Australia; Mr. Williams, Oxford; Mr. Glatz, Champel; Messrs. Lee and Nightingale, Liverpool; Dr. Sanctuary, Salisbury; Messrs. Blake and Co., Leeds; Dr. W. J. Collins, London; Dr. Branthwaite, High Shot House; Mr. Bilton, Clifton; Mr. Ernst, London; Dr. Jamieson, Shanghai; Dr. Burn, Stafford; Mrs. Gray, Banff; Messrs. Dawson Bros., Montreal; Mr. Barnes, West Hartlepool; Messrs. Summer and Co., Castleford; Mr. Patterson, Butterknowle; Messrs. Whitfield and Co., Birmingham; Messrs. Bradshaw, Notts; Messrs. Oliver and Boyd, Edinburgh; Mr. Boyd, Wandsworth; Mr. Tunmer; Mr. Van Voorst, London; Mr. Manwaring, Kensington; Messrs. Condy and Co., London; Mr. Moring, London; Mrs. Pratt; Dr. Walton, Ebden Bridge; Mr. Groves, Dorchester; Mr. Daws, Wandsworth; Mr. Lace, Hemel Hempsted; Mr. McNunn, Islington; Messrs. Maythorn and Son, Biggleswade; Dr. Leichman, Buchin; Mr. Jacob; Messrs. Bois and Cross, London; Mr. Sturmfels, London; Messrs. Peebles and Co., London; Mr. H. G. Phillips, Biggleswade; Messrs. Wyley and Co., Coventry; Dr. Thos. Reid, Lochmaben; Messrs. Wright and Co., Bristol; Mr. Owthwaite, London; Mr. Gibson, Bromley; Dr. W. Hunter, Edinburgh; Mr. Annandale, Edinburgh; Messrs. Billing and Son, Bristol; Mr. E. A. Thompson, Ripley; Messrs. Hunter and Co., Aberdeen; Mons. C. Eloy, Paris; Dr. Squire, London; Mr. J. S. Wood, London; Mr. Hornibrook, London; Mr. MacDonald, New Abbey; Mr. Cooke, Lowestoft; Mr. Colman, Cardiff; Mr. Smith, Evesham; Dr. Ridge, Enfield; Mr. Moss, London; Mr. Poole, Shrewsbury; Dr. Needham, Gloucester; Mr. Blackwood, Wednesbury; Mr. Haslam, Birmingham; Mr. Hackett, Manchester; C. J. E.; Circocele; Ambulance; A Victim; Enquirer; Traveller; Unqualified Assistant; K. K.; M.D.; B., Dawlish; H. O.; Medicus, Monte; Nuda Veritas; B., Bournemouth; A. G.; Matron, Bristol; Secretary, Milton Chemical Co.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Powell, London; Sir J. Sawyer, London; Mr. Logan, Glasgow; Mr. Smith, Manchester; Mrs. Wontner, St. Leonards-on-Sea; Messrs. Symes and Co., Liverpool; Mr. W. Thompson, London; Messrs. Zimmermann and Co., London; Messrs. Black, Edinburgh; Messrs. Richardson and Co., Leicester; Mrs. Bellamy, Grantham; Messrs. Slinger and Co., York; Mr. Boyveau, Paris; Mr. Warman; Mr. Furneaux, Forest Hill; Mr. Finlay, Germany; Mr. Geddes, London; Messrs. Burgoyne and Co., London; Mr. Morris, Swansea; Mr. Brockelbank, London; Mr. Cowan, Bridgwater; Dr. Russell, Wickham; Messrs. Kilner and Co., London; Mr. Bean, Plymouth; Mr. Maycock, Staffs; Mr. Reid, Canterbury; Mr. Bruce, Dingwall; Mr. Bell, Dover; Messrs. Hooper and Co., London; Dr. Hudnott, Brooklyn; Messrs. Benjamin and Sons, London; Mr. Shirtliff, Kingston-on-Thames; Messrs. Bullock and Co., London; Mr. Unsworth, Liverpool; Dr. Adye, Bradford-on-Avon; Mr. Fuge, Taunton; Mr. MacMordie, Belfast; Dr. Williams, London; Dr. Fulton, Toronto; Mr. Smith, Finsbury; Mr. White, Bayswater; Mr. Webb, Bury; Mr. Baker, Dawlish; Mr. H. Carpenter, London; Miss Chreiman; Dr. Taylor, Nottingham; Messrs. Sherwood and Co., Manchester; Mr. Little, Cymmer; Mr. Rowley, Auckland, New York; Dr. Pope, Hardisley; Mr. Davis, Worcester; Messrs. Godlard and Massey, Nottingham; Mr. MacLehose, Glasgow; Messrs. Smith and Son, Liverpool; Dr. Arnison, Newcastle-on-Tyne; Messrs. Webb and Co., Kingsbridge; Mr. Chamberlain, Harlston; Messrs. Loedund and Co.; Dr. Ritchie, Otley; Dr. Alderson, Hammersmith; Mr. Van Praagh; Mr. Rhydl, London; Mr. Galloway; Messrs. Mackey and Son, Morpeth; Dr. Smith, Leamington; Mrs. Stirling, Portsmouth; Dr. Fletcher, Highgate; Mr. Hitchin, Nottingham; Messrs. Giles and Co., Clifton; Mr. Furness, Wigton; Mr. Brown, Hull; Mr. Piesse, London; Mr. Crossdale, Colne; Mr. Gilyard, Bradford; Mr. Stewart, Rotherham; Mr. Robertson, Edinburgh; Miss Proctor, Middlesbrough; Larynx; M. A.; Medicus, Chesterton; Salopian, London; Medicus, Banbury; Nucleus; Vicar, Ilfracombe; M.D., Leeds; Secretary, Marylebone; Dr. M., Accrington; H. P. H., Sydenham; Imogene, Folkestone; Coca; R. A.; A. X. L., Lambeth; Z. Y. X.; Medicus, Brockley; Epsilon, Newcastle-on-Tyne; Alpha, Stamford; W. H. L., Derby; Alpha, Brighton; Surgeon, Pontypridd; X. Y.; Medicus, Buntingford; M. I.; Surgeon, Redcar; X., Carlisle.

Birmingham Daily Gazette, Liverpool Courier, Western Morning News, Middlesex Chronicle, Liverpool Mercury, Liverpool Daily Post, Pendleton Reporter, The Methodist Times, &c., have been received.

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